



# Virtual Dynamic Classroom Instructional Model Playbook for District Partners

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# Unit 1: Virtual Dynamic Classroom Instructional Model (DCIM) Playbook Welcome

## Welcome to the Virtual DCIM Playbook!

When was the last time you were asked to describe the instructional model used in the courses that you teach?

There are different ways that virtual courses for grades K–12 may look, feel, and operate. With so much dependence on technology, it can be easy to get caught up in the worries about building positive student and family relationships, tracking student work, and making sure that students are getting the support they need when you can't be next to them to guide them. If you have been teaching virtually for a while, you most likely have seen a variety of approaches to asynchronous instruction. It's not always obvious what drives the course design. If someone asked you what instructional model is used for the courses you are teaching, could you provide a quick "elevator pitch" to describe it?

Pearson's K–12 asynchronous courses have evolved over time, and we are pleased to shine light on the Pearson Curriculum using the Dynamic Classroom Instructional Model (DCIM) that is the bedrock of the new curriculum. This model was developed from experiments and research conducted in K–12 schools. More detail is provided in the following sections of this welcome unit.

## DCIM Playbook Overview

The DCIM Playbook provides the basics needed to understand and implement this instructional model for K–12 online courses. Additionally, there are professional development discussion topics at the end of each unit, except for Unit 1. These topics are meant to be used in a variety of ways, including small or large group professional development opportunities that may be school-based or broader in participation. Just as students can benefit from synchronous learning sessions, teachers and others may benefit from taking one or more of the suggested topics and exploring them together as professionals.

As a District Partner, you may be using one or both of the existing platforms for the Pearson Online Classroom. To make this Playbook useful to multiple district scenarios, there are times when two screenshots are shown for the same place in a course because the display looks different in each platform. In this case, we will consistently reference the two platforms as Platform A and Platform B for ease of understanding.

## The Student Welcome to a Course Built on the DCIM

While the DCIM Playbook is written to help teachers understand the instructional model and foundation for how lesson and courses are created in the Pearson Curriculum, it is helpful to note that the students may also need guidance about what to expect in the structure of the course. Included in the Course Overview for students is information about accessing and navigating the course, working in the course, and receiving grades and feedback.

The Course Overview section contains welcome videos for lower and upper grades that provide guidance for students. Teachers should become familiar with what the students see to orient them to the course. To watch a video, log in to a course in the Pearson Online Classroom and select Lesson 1: Course Overview.

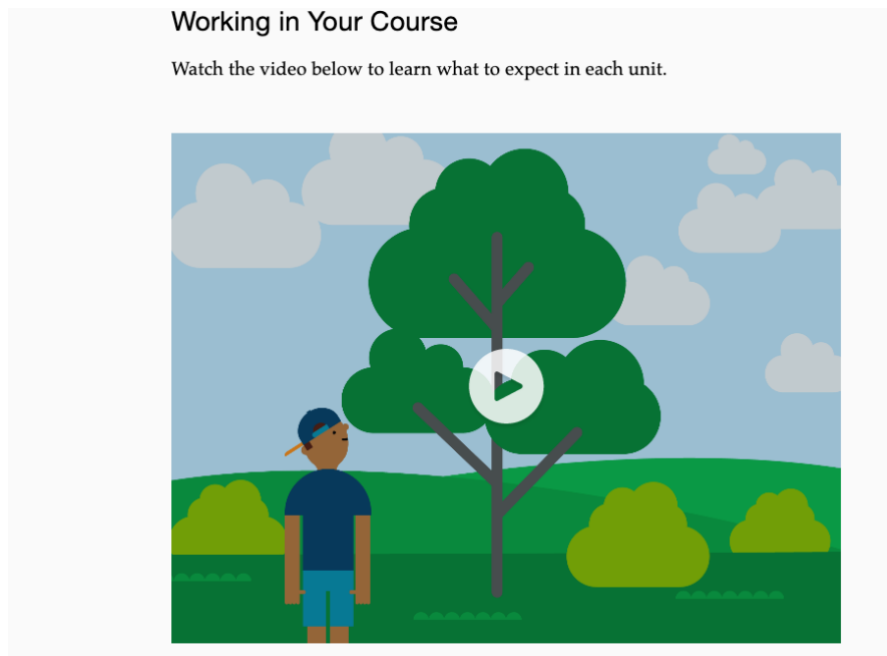


Figure 1. Image of lower grades welcome video

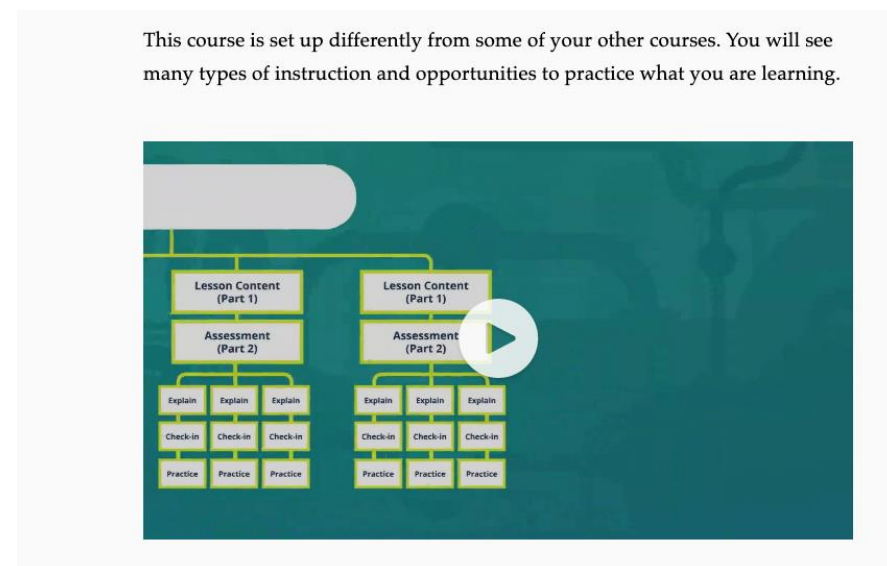


Figure 2. Image of upper grades welcome video

Both the lower and upper grades welcome videos mention content lessons that start with an Explain section, followed by Check-In and Practice sections. This DCIM Playbook will provide deeper information about this format in the units that follow.

## **The Evolution of the Pearson Dynamic Classroom Model**

### ***Research***

Pearson conducted extensive research to identify research-based practices that inform the development of the School Framework. The review was based on several bodies of literature, including but not limited to the following:

- school effectiveness research
- analyses of data from longitudinal comparative surveys of achievement, particularly the Programme for International Student Assessment (PISA) for the Organisation for Economic Co-operation and Development (OECD)
- literature on school improvement and school system reform
- studies in cognitive science and neuroscience related to how students learn
- meta-analyses of research into various interventions and other “what works” syntheses of research

To reinforce the rigor of the practices and to address new research findings in effective teaching practices, Pearson commissioned a refresh of the Pearson School Framework in 2016. To conduct the refresh, Pearson appointed the UK-based Centre for the Use of Research and Evidence in Education (CUREE), an education-specialist consultancy, to be our research partner. We also partnered with Professor Steve Higgins of Durham University to enhance the rigor, relevance, and research of the pedagogy and assessment elements of the learning framework.

Pearson reviewed evidence from 26 meta-analyses and systemic reviews, with preference to studies undertaken with schools in typical contexts. Additionally, Pearson used the database from the Education Endowment Foundation’s teaching and learning toolkit as a research resource.

### ***The Pearson School Framework***

The School Framework consists of a learning model with six elements, each having principles for how to implement the element. The table that follows highlights the learning model components, with a summary of the approach to bring it to life. Recall that this School Framework was written based on research that was targeted to brick-and-mortar settings. As you read, be aware that in the virtual model, the Learning Coach plays a vital role in providing ongoing feedback, particularly in the earlier grades. The curriculum is a direct result of addressing state and national learning standards with corresponding learning objectives.

<b>Curriculum Expectations</b>	The curriculum articulates the purpose of learning and describes the knowledge and skills learners need to acquire to achieve that purpose. The curriculum informs instruction and assessment, and therefore underpins the full learning model of the School Framework. Optimally, a curriculum is supported by a clear set of standards or learning objectives and progressions.
<b>Planning and Preparation</b>	Strategically plan for ambitious schemes of learning, supported by learning experiences that deliver on curriculum and learning objectives, while allowing flexible adjustment considering students' needs and the external context.
<b>New Learning</b>	Bring ideas, facts, phenomena, and situations to learners' attention for the first time or in a new context. Illustrate this content in real-world contexts and help learners understand why it exists or operates as it does.
<b>Deep Learning</b>	Ensure that once new ideas, information, phenomena, or skills have been introduced, learners have opportunities to revisit them to develop fluency and accuracy in their use in a range of contexts. Engage learners in applying their knowledge and skills through solving problems and completing challenges that prompt depth, rather than just coverage.
<b>Ongoing Feedback</b>	Information from the learner is used to differentiate and adjust learning and teaching. Two-way feedback between teacher and learner is deployed to help both parties refine their contributions to securing learning progress. Feedback is also provided to the learner to help them focus, build on, and refine their learning. This should include regular opportunities for both peer and self-assessment.
<b>Achievement</b>	Evaluate student learning, skill acquisition, and academic achievement at the conclusion of a defined period of instruction to recognize progress and identify areas of difficulty or misunderstanding.

*Table 1. The School Framework learning components*

## ***The Dynamic Classroom Model as a Learning Pattern***

The Dynamic Classroom model is used for the new Pearson Curriculum in our K–12 online courses. The six phases and the learning pattern under each phase has not changed from the original research work. The Pearson Curriculum courses with the DCIM have a consistent pattern for these components. You can see it in the graphic provided (Figure 3).

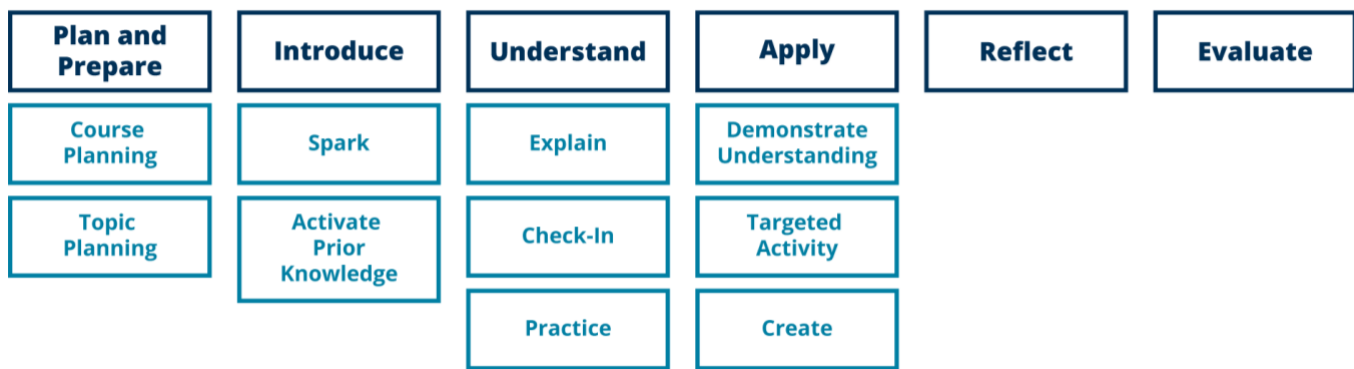


Figure 3. The Dynamic Classroom model as a learning pattern.

In Unit 2, we will look closely at each phase of a Pearson Curriculum course with the DCIM and the components that are part of each phase.

## Unit 2: The Dynamic Classroom Instructional Model Phases

### Plan and Prepare

**Key Word:**

**Objective Taxonomy** – This is the classification of concepts and skills known as learning objectives.

The Pearson Curriculum courses you teach are produced by Pearson. Courses begin with the Plan and Prepare phase. This is the pre-work that initiates the course design. You will not see Plan and Prepare in a course itself—the DCIM phases evident in a course are Introduce, Understand, Apply, Reflect, and Evaluate.

### The Objective Taxonomy and Standards Alignment

The Plan and Prepare phase of the DCIM starts with establishing an objective taxonomy for a course, one of the fundamental parts of our new Pearson Curriculum. We develop the objective taxonomy by analyzing national and state standards, breaking them down into learning objectives, or discrete concepts and skills, then looking at where those learning objectives align with each other, where they build on and support each other, and where they are distinct from each other. We then build lessons and assessments to fit those learning objectives.

Using Language Arts 6 as an example, we looked at the most commonly found learning objectives and used those to build the scope, sequence, and course map for our base grade 6



language arts course. Then, we identified which learning objectives were needed for each state and used those to build the state-specific scopes, sequences, and course maps, removing learning objectives that weren't necessary in order to accommodate those that would have the greatest impact on achievement for students in that state.

The objective taxonomy puts Pearson in a great position to support course customizations and personalized learning going forward.

The Pearson Curriculum aligns to the National Standards for Quality Online Courses. These standards may be found at the [National Standards for Quality Online Courses website](#).

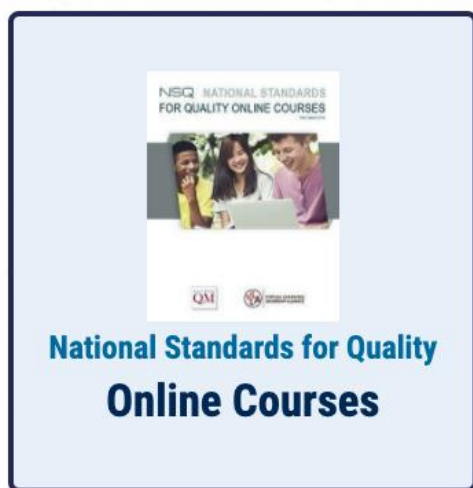


Figure 4. [The National Standards for Quality Online Courses](#).

The Plan and Prepare phase is at the heart of the DCIM and the Pearson Curriculum. Knowing your course is aligned to state and national standards and adheres to the National Standards for Quality Online Courses allows teachers, parents, and schools to check one of the most critical boxes when explaining the quality of the Pearson Curriculum.

### ***Teacher Tip for Understanding***

As mentioned, when looking at an actual course, you will not see a section called Plan and Prepare because this phase is completed in preparation for writing the course and is not a student-facing component.

### ***Learning Objectives***

What is student facing is the learning objective (called Objective in the course) for each Understand cycle of Explain, Check-In, and Practice (together, we call these a learning object bundle). If one or more of the content bundles are working from the same learning objective, it displays only at the start of the cycle. If a different learning objective is linked to a second or third content bundle in the lesson, it is shared with the student at the start of that section (see Figure 5).

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## Objective

In this section, you will describe the overall organization of structures that allow organisms to carry out essential life functions.

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*Figure 5. Example of a student-facing objective from a Biology A course, Unit: DNA.*

## **Pearson Standards**

In approaching a Pearson Curriculum course with the DCIM, it helps to think about an iceberg. Under the water (or at the foundation of the course) there are the national and state standards that are integral to the Plan and Prepare phase. Above the water are the standards that relate to online instruction, the teacher, and Learning Coach commitments. Together, these beliefs and standards are what makes a well-aligned course and a well-executed learning experience. Key beliefs and standards should be part of our collective commitment to helping students succeed in the Pearson Curriculum and beyond.

## **The Teacher's Role in Plan and Prepare**

While the Plan and Prepare phase involves learning objectives and course creation, Dynamic Classroom Teachers have a different but most important role in their own planning and preparation. Their actions start when the teacher first gets access to the Pearson Curriculum course they will be teaching.

There are three overarching questions you should ask when reviewing a course:

- What's in the course?
- What's not in the course?
- What do I need to do to be ready?

Specific to the DCIM, the Dynamic Classroom Teacher will want to think about:

- What are the learning objectives/standards that make up the sequence?
- Is there a Portfolio in a unit?
- What do the assessments look like?
- Is there a Discussion?
- What will be needed for synchronous lessons?
- What do I want to do with the Sample Work?
- How will I know if my students understand the content while they are still in a lesson, before formal assessment?

Aside from the course itself, there are also two essential documents that should guide your planning and preparation as a teacher. The first document is a framework provided by the [National Standards for Quality Online Teaching](#). Become familiar with this document and consider areas that you will need to be deliberate about in your planning.

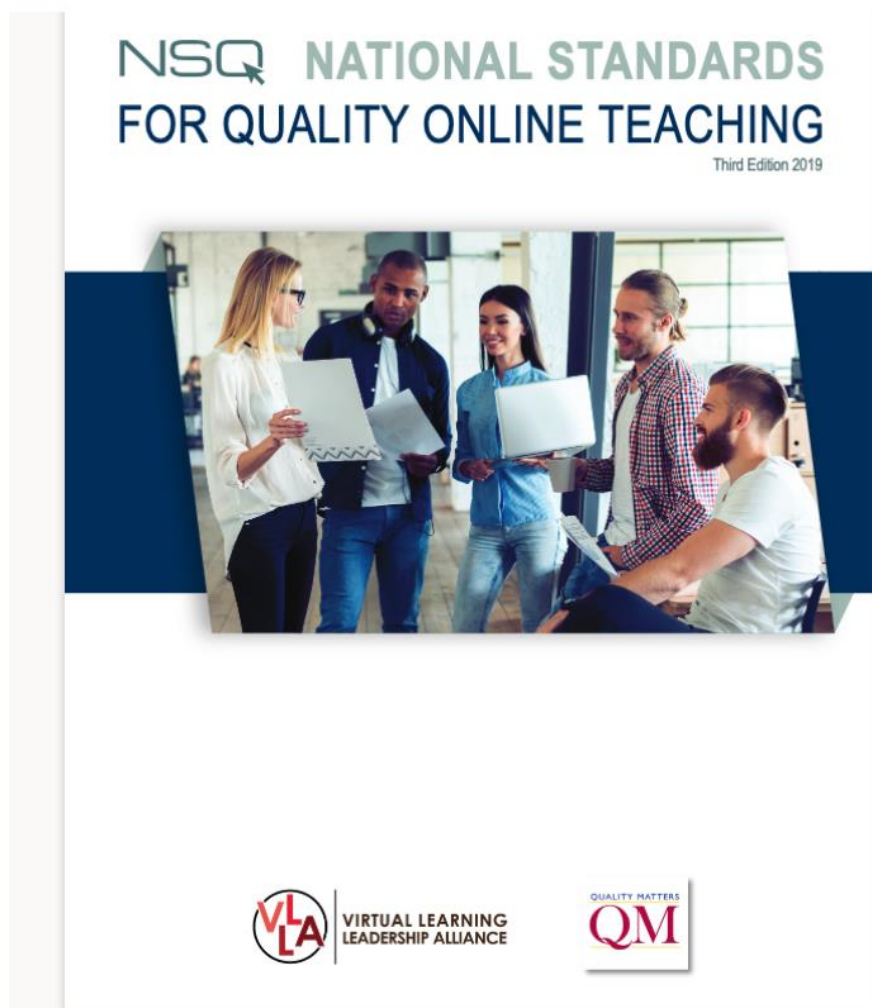


Figure 6. Cover image for the National Standards for Quality Online Teaching.

As you examine each phase and component of the DCIM, consider how these standards interplay with the instructional model.

## Introduce

### Key Words:

**Spark** – Spark is an activity designed to pique students' interest and curiosity about a new topic.

**Activate Prior Knowledge** – As part of the Introduce phase, students are reminded of any prior knowledge and skills they may have acquired to help establish a connection with the new topic.

**Social and Emotional Learning (SEL)** – These are competencies that articulate goals for what students should know and be able to do in terms of their social and emotional development.

The five SEL competencies (established by CASEL) are self-awareness, self-management, social awareness, relationship skills, and responsible decision-making.

## The What, Why, and Where of Introduce

The Introduce phase of the DCIM involves the introduction of a new unit and includes Spark and Activate Prior Knowledge activities. This phase seeks to create interest and curiosity in the new unit, and to activate and connect students to prior knowledge and skills required for the new unit.

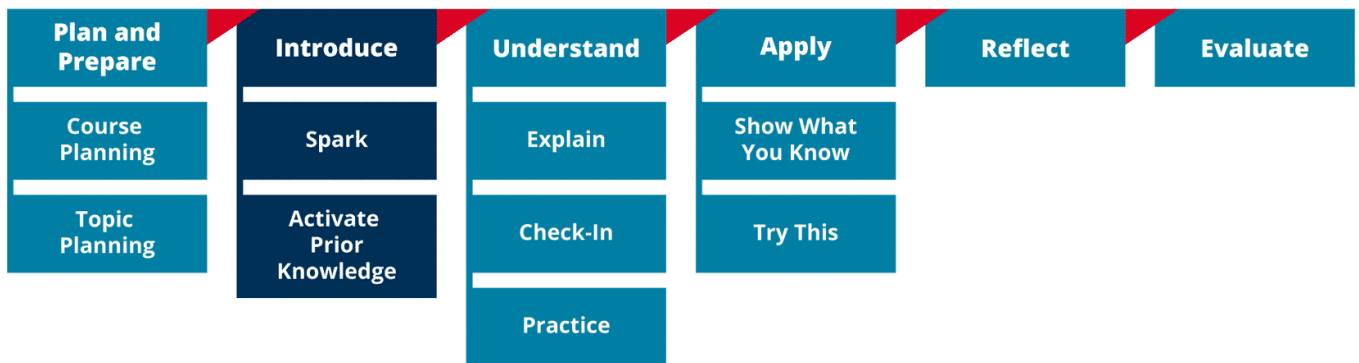


Figure 7. The Dynamic Classroom Instructional Model highlighting the Introduce phase.

Teachers should note that in activating prior knowledge, the course will refer to content but not to specific prior units. For example, you will not see, “In the last lesson we....” or “In Unit 2 we....”

Some teachers may support the Introduce phase with synchronous learning time or extra resources. While Learning Coaches are expected to provide guidance for their learners, teachers need to know if there are prior knowledge gaps. You may need to brainstorm solutions to address this scenario if it is the case.

Note that courses delivered prior to the 2022-2023 school year may begin with an SEL lesson. Move past it to reach the academic lesson introduction. In our example that follows, the unit introduction is Lesson 1, as seen in the course outline. The first example depicts a course outline in Platform A, and the second is one in Platform B. The third image shows part of the introduction page content.

# Course Outline

★ indicates lesson notes    📄 indicates lesson intro page

## 3. Reading Information Text

### ▶ 1. Reading Informational Text Introduction

- 2. Genres [Quick Check](#)
- 3. Central Ideas [Quick Check](#)
- 4. Summarizing [Quick Check](#)
- 5. Analyzing Connections [Quick Check](#)
- 6. Determining Word Meaning [Quick Check](#)
- 7. Analogies [Quick Check](#)
- 8. Allusions [Quick Check](#)
- 9. Word Choice [Quick Check](#)
- 10. Providing Evidence [Quick Check](#)
- 11. Comparing Authors [Quick Check](#)
- 12. Reading Informational Text Apply [Practice](#)
- 13. Reading Informational Text Review [Sample Work](#)
- 14. Reading Informational Text Unit Test [Test](#)

Figure 8. Illustration of intro lesson from a Language Arts 8A course in Platform A.

▼ 📁 Reading Information Text

- 📄 Reading Informational Text Intro
- 📄 Genres
- 📄 Genres Quick Check
- 📄 Central Ideas
- 📄 Central Ideas Quick Check
- 📄 Summarizing
- 📄 Summarizing Quick Check
- 📄 Analyzing Connections
- 📄 Analyzing Connections Quick Check
- 📄 Determining Word Meaning
- 📄 Determining Word Meaning Quick Check

Figure 9. Illustration of Introduction lesson in course outline from Platform B.

## Reading Informational Text

Information—it's all around us. Look around you and you'll collect all kinds of information. The size of the room, the time of day, the type of computer you're using. Information includes any [fact](#).

But it's not just facts. Information includes all the things you did today, how your body works, and why the Earth revolves around the Sun. Any true [idea](#) is also an example of information.

In addition to looking at the world around you, you can also gather information by reading an informational text. By now you've read all kinds of [informational texts](#): newspaper and magazine articles, encyclopedia entries, history and science texts, how-to articles, journal entries, and more.

### Activate Prior Knowledge

Think about what makes up an informational text. Which of these texts would be considered informational?

*Figure 10. Illustration of the academic intro slide in the Language Arts 8A course.*

We know from the DCIM graphic that the Introduce phase has a Spark and an Activate Prior Knowledge components. Notice that the word Spark is not used specifically, but the idea is incorporated in the language that comes before the Activate Prior Knowledge section.

In summary, when you select any Lesson 1 Introduction of a unit, you may or may not first see a social and emotional learning lesson that is followed by the academic introduction. Also note that the Introduce phase name is not seen in the course. Instead, we see the word Introduction on the course outline.

## Understand

### Key Words:

**Explain** – Explain is a component of the Understand phase in which new concepts and skills are presented that build upon a student's prior knowledge and help to make connections with new learnings.

**Check-In** – Check-In is a task that gives students the opportunity to engage with the new learning from Explain and "give it a try." It serves as a quick formative assessment to identify the student's level of understanding and proficiency of the learning goal.

**Practice** – In Practice, students continue to apply the acquired knowledge and skills related to the small part of a concept that was introduced in Explain and first applied and assessed for understanding in Check-In.

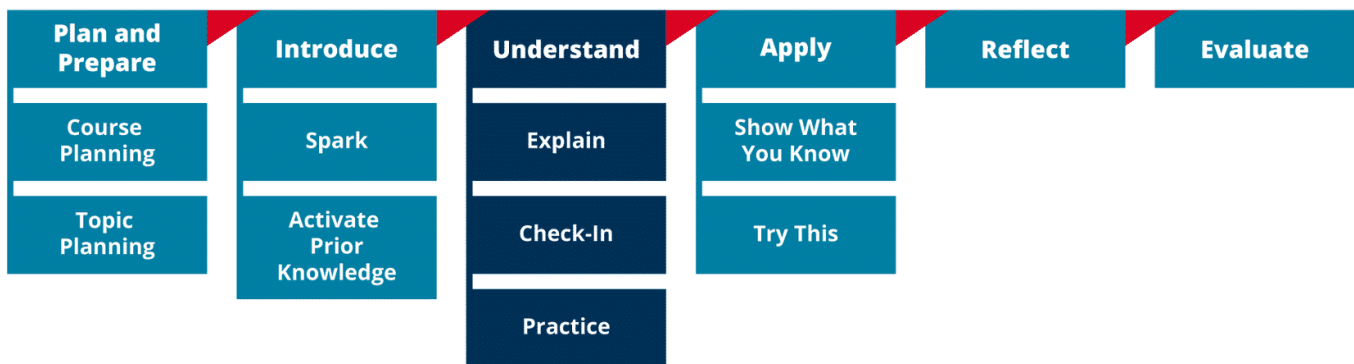


Figure 11. The Dynamic Classroom Instructional Model highlighting the Understand phase.

## The What, Why, and Where of Understand

The Understand phase is at the heart of the student’s instructional experience. It involves several iterative cycles (we like to call content bundles) built around the learning objectives of the unit. Each content bundle generally includes the same three components, possibly with a different learning approach per bundle.

The three components of the content bundle include Explain, Check-In, and Practice.

### **Explain**

In Explain, new concepts and skills are presented that build upon a student’s prior knowledge and help to make connections with new learnings. Students are provided with the necessary conceptual and procedural information to complete the task given in Check-In.

### **Check-In**

Check-In is a task that gives students the opportunity to engage with the new learning from Explain and “give it a try.” It serves as a quick formative assessment to identify the student’s level of understanding and proficiency of the learning objective. The student’s response to the task triggers feedback so that students clear up misconceptions before practicing for fluency.

### **Practice**

In Practice, students continue to apply the acquired knowledge and skills related to the small part of a concept that was introduced in Explain and first applied and assessed for understanding in Check-In. In this phase, practice relates only to the concept that has been explained.

#### Practice Key Characteristics

- This step consists of tasks designed to provide opportunities to practice the knowledge and skills gained in relation to a specific learning objective.
- The tasks are designed to build fluency through practice.

- These tasks allow a variety of approaches to demonstrate a secure understanding of a specific learning objective.

A content bundle in the Understand phase is a collection of content items, practice items, and assessment items that are combined based on a single learning objective. It consists of instructional content and practice activities, as well as assessment.

**Content Bundle = Explain, Check-In, and Practice for ONE learning objective.**

Figure 12. Content bundle components.

A rule of thumb is that it takes about 20 minutes for a student to move through a content bundle. Of course, this varies widely by student and complexity of the topic.

### **Explain, Check-In, and Practice as it Looks in a Course**

What does this cycle look like in a course? Let's use Science 4A as an example. Lesson 4, Energy and Speed, is in the Mechanical Energy and Speed Unit in the course tree. Outlines for both platforms are below.

**Course Outline**

★ indicates lesson notes    📄 indicates lesson intro page

**Science 4 A**

1. Course Overview
  1. Course Overview Quick Check
2. Mechanical Energy and Speed
  1. Mechanical Energy and Speed Intro
  2. Mechanical Energy Quick Check
  3. Mechanical Energy and Speed Quick Check
  - ▶ 4. Energy and Speed Quick Check
  5. Energy and Collisions Quick Check
  6. Mechanical Energy and Speed Apply Practice
  7. Mechanical Energy and Speed Review Sample Work
  8. Mechanical Energy and Speed Unit Test Test

Figure 13. Illustration shows a course tree, Science 4A, Unit on Mechanical Energy and Speed, lesson 4 on Energy and Speed from Platform A.



## Mechanical Energy and Speed - Activities

 Search











-  Mechanical Energy and Speed Intro
-  Mechanical Energy
-  Mechanical Energy Quick Check
-  Mechanical Energy and Speed
-  Mechanical Energy and Speed Quick Check
-  Energy and Speed
-  Energy and Speed Quick Check
-  Energy and Collisions
-  Energy and Collisions Quick Check
-  Mechanical Energy and Speed Apply

Figure 14. Illustration shows part of course outline, Science 4A, Unit Mechanical Energy and Speed from Platform B.

The first slide in a content bundle with a new learning objective contains the objective and the key words.

## Objective and Key Words

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### Objective

In this section, you will collect data from an experiment on the speed and energy of an object.

---

### Key Words

- **energy** — the ability to make an object change the way it moves
- **force** — a push or a pull applied to an object
- **kinetic energy** — the energy an object possesses because of its motion; the faster an object moves, the greater its kinetic energy

Figure 15. Objective and Key Words page for Science 4A unit on Mechanical Energy and Speed, Lesson 2 on Energy and Speed.

## Energy and Speed

When objects are in motion, their mechanical energy is often converted, or changed, from one type to another. This conversion of potential energy and kinetic energy can be modeled using toy cars and ramps.

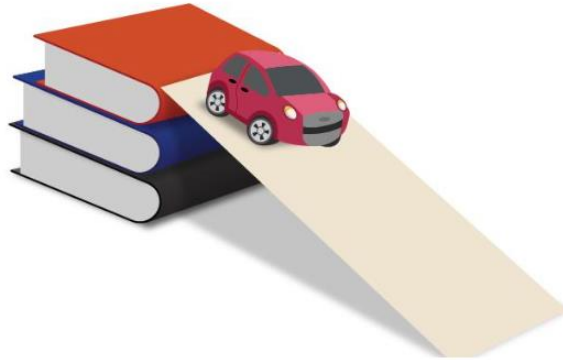


Figure 16. First Explain slide for Science 4A lesson on Energy and Speed.

The first slide in lesson 4 is an Explain slide called Energy and Speed. You do not see it labeled that way but know that the Explain slide is used for presentation of new concepts and skills that build upon a student's prior knowledge and help to make connections with new learnings. This is where instruction happens. In this example, there are two slides that are Narrative: Explain. If you mouse over the advance arrow, you will see the words Narrative: Check-In

Narrative: Check-In >

Figure 17. Example of Narrative: Check-in advance arrow.

Because we know the sequence is Explain, Check-In, and Practice, we can confirm that the first slide is Explain. Hovering over the advance arrow shows that this cycle, or bundle, is using the narrative learning approach. We will talk more about the learning approaches later in this Playbook.

The next slide will be a Check-In slide.

# Check-In

## Question 1

Imagine a toy car rolling up a ramp. What can you say about the change in toy car's kinetic and potential energy as moves up the ramp?

Answer

## Question 2

Complete the activity to show what you've learned about potential and kinetic energy.



Figure 18. Example of a Check-In slide with a View Interactive button.

For Check-In, the student performs tasks or activities designed to demonstrate their understanding or misconception, which can be addressed quickly. For the Check-In in this example, we have an interactive. There is a question and four possible answer options.

Draw a line to connect each term to the correct section of track. ×

some potential energy and some kinetic energy	
highest potential energy	
highest kinetic energy	

Figure 19. Example of a Check-In interactive.

From the narrative Check-In, we see what slides come after and before by hovering over the arrows.

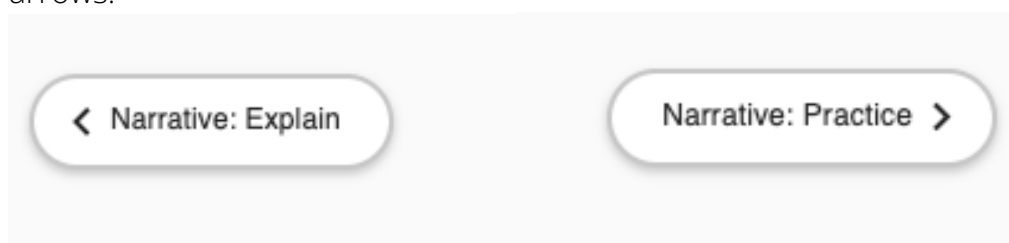


Figure 20. Example of advance and go-back arrows within a narrative bundle of a lesson.

Looking at the arrows, we can see that if we go back a slide, we are in Explain. If we move forward, we come to the third component of the cycle, or bundle, which is Practice.



Source: Mohd Suhail/Pearson India Education Services Pvt. Ltd

### Question 1

How does the bicyclist's energy change as he starts at the bottom of the hill, travels up, and then down the other side of the hill?

Answer

### Question 2

Use the evidence you have gathered. What can you say about the relationship between an object's speed and its kinetic energy?

Answer

Figure 21. Example of a Practice with answer buttons that reveal the correct response.

In Practice, the student practices and demonstrates their depth of understanding of the new concepts and skills. For this particular Practice, the student might write the answer for themselves or speak the answer to their Learning Coach. They can then check to see if they are correct. Practices also make good material for teachers to borrow from for synchronous group work.

If we were to continue to the next section of the lesson (to a new content bundle) in this example, we see what comes next by hovering over the arrow.

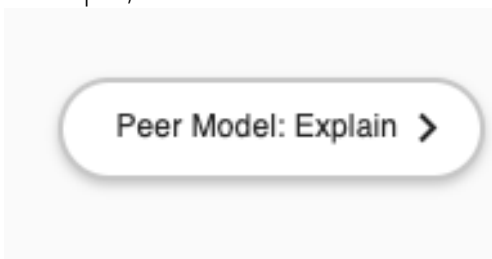


Figure 22. Example of a Peer Model: Explain advance arrow.

The content bundle of Explain, Check-In, and Practice begins again with the new learning approach, the peer model. More on that to come.

## Apply

Key Words:

**Show What You Know** – This activity provides students an opportunity to demonstrate the knowledge and skills acquired in relation to the unit’s learning objectives in new and unrehearsed situations.

**Try This** – This activity encourages students to develop and use higher-order thinking skills. It is where students pull together the concepts and skills they have learned about the topic.

## The What, Why, and Where of Apply

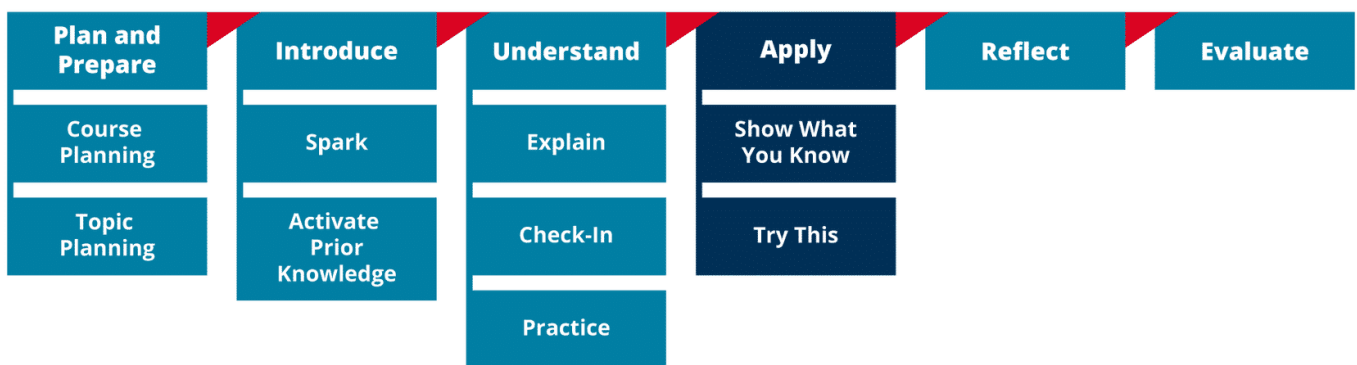


Figure 23. The Dynamic Classroom Instructional Model highlighting the Apply phase.

The Apply phase involves the use of an activity that provides students with an opportunity to demonstrate their level of understanding of the knowledge and skills acquired (related to multiple learning objectives) in new and unrehearsed situations. Student responses from the Apply activity are used by Learning Coaches to identify any remaining gaps in the student’s understanding of the topic and highlight any lingering misconceptions of the concepts taught. Teachers may choose to use Apply as part of a synchronous lesson or Sample Work.

The Apply lesson is designed to:

- Provide an activity to measure student understanding of all the interrelated learning objectives covered in the unit lessons.
- Allow observation of a student’s responses to identify any misconceptions.
- Provide appropriate targeted activities to address misconceptions to allow learning to progress.

The Apply phase typically comes near the end of a unit and is broken into two parts: Show What You Know and Try This.

### **Show What You Know**

A Show What You Know activity provides students an opportunity to demonstrate the knowledge and skills acquired in relation to the unit’s learning objectives in new and unrehearsed situations. This activity is a rich assessment tool. The targeted activities that follow are designed to meet students where they are and move them along a progression of

understanding by not simply providing further practice of the same thing, but by systematically targeting the specific gaps in understanding that prohibit progress.

### **Try This**

In Try This, students are encouraged to develop and use higher-order thinking skills. It is where students pull together the concepts and skills that they have learned about the topic. In a Try This activity, students are typically asked to generalize, predict, draw conclusions, and create something new. These activities can take many forms and typically use one of the following verbs:

organize	formulate	plan	imagine	invent
develop	collect	elaborate	combine	construct
assemble	propose	change	improve	manage
predict	adapt	produce	set up	create
arrange	design	write	compose	

### **A Note about Apply and Assessment**

The Apply portion itself is not an assessment, but it sometimes contains an assessment. Often, Apply will be its own lesson but will not contain an official assessment. Other times, the Apply portion of a lesson could be a Portfolio or a Discussion assessment.

### Reflect (Review, Reflect, Study Tips)

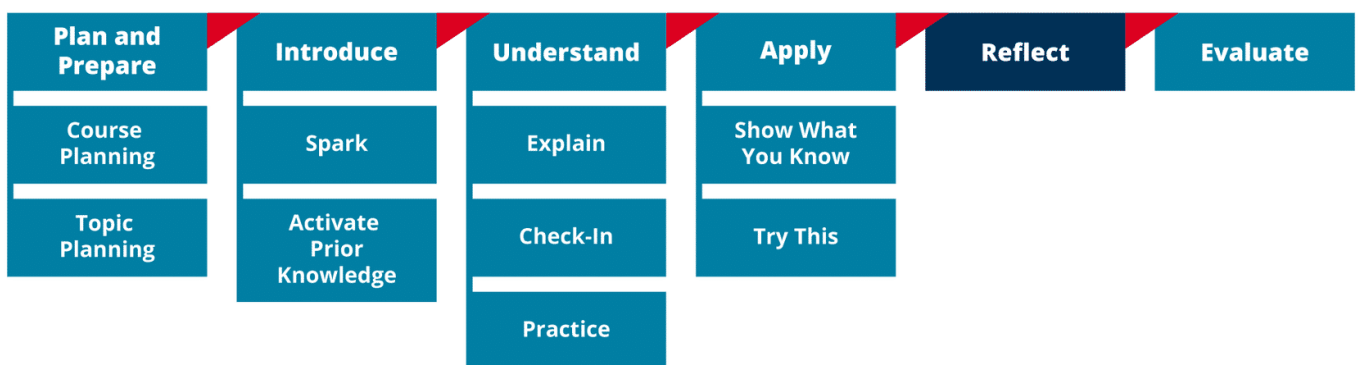


Figure 24. The Dynamic Classroom Instructional Model highlighting the Reflect phase.

Key Words:

**Reflection** – Reflection is careful thought about something.

**Self-regulated learning** – Self-regulated learning is the intentional planning, monitoring, regulating, and reflecting by a student.

**Metacognition** – Metacognition is the awareness and understanding of one’s own thought process.

**Portfolio** – A Portfolio activity is a package of learning object bundles that culminate in a performance activity for students, submitted for teacher grading. Unlike other instructional content bundles in the courses, those that make up a portfolio may be sequenced and dependent on each other. A Portfolio may act as the Apply component of a unit, but the Apply component of a unit will not always be a Portfolio activity.

## **The What, Why, and Where of Reflect**

Students have an opportunity to do an online practice test at the end of the Apply phase in the Pearson Curriculum with the DCIM. Students take this information into the Reflect phase of the unit as they go through the Review, Reflect, and Study Tips components of the lesson. This phase may be referenced as a unit Review, Reflect and Review, or Review in the course outline.

The Review, Reflect, and Study Tips elements of the Reflect phase are included to help the student become self-regulated in their learning and use metacognition to improve the act of learning. Self-regulated learning is the intentional planning, monitoring, regulating, and reflecting by a student, and it makes a significant difference to student outcomes. During this lesson, students are asked to think about how they did with their practice test. They are provided a list of topics from the unit and asked to consider if they feel confident about each topic before taking the unit test. If not, they are prompted to go back and review the lessons needed.

The Reflect portion of the Reflect lesson varies among the courses, but students may be given sentence starters as guides to write a reflection about their learning.

Lastly, students are given a list of Study Tips to consider in preparation for the unit test.

## **How Review, Reflect, and Study Tips Look in the DCIM**

While the DCIM calls this phase Reflect, our courses display this section as Review, or Review and Reflect, in the course outline. If we select the Review and Reflect lesson in the Biology lesson, we would see the following:

## Biochemistry: Review

Today you will review all topics that you've learned in this unit.

Read through the list of topics from this unit. Make sure that you feel confident about each of them before taking the unit test. If there are any topics that you forget or think you need to practice, go back and review those lessons now.

- identifying the basic elements that make up all biomolecules
- explaining the formation of biomolecules from sugar and other molecules
- explaining how organisms take in and rearrange atoms of matter
- using evidence to explain the atomic similarities between biomolecules
- identifying reliable sources of scientific information
- explaining the conservation of matter in biochemical processes

## Biochemistry: Reflect

Figure 25. Example of Review slide.

The Review slide essentially lists all the learning objectives for a unit with a prompt such as the following:

Read through the list of topics from this unit.

Make sure that you feel confident about each of them before taking the unit test. If there are any topics that you forgot or think you need to practice, go back and review those lessons now.

In the following Reflect example, students are asked to use sentence starters as guides for their reflection:

## Biochemistry: Reflect

Write a reflection about your learning in this unit. Your reflection should be at least 3 sentences. Use the following sentence starters as a guide.

- The main idea of this unit is...
- Understanding biochemistry is important to understanding biology because...
- The concept I need to review the most is...

Figure 26. Example of a Biochemistry Reflect slide.

The last section in the Reflect and Review lesson is Study Tips. The Study Tips are good suggestions on how to study so students can retain the knowledge they need for the unit test.



## Study Tips

Are there any topics that you need to go back and review? Use the following tips while studying:

- Review your results on previous assessments in this unit.
- Make flashcards to test yourself on vocabulary words and their definitions.
- Teach a friend or family the importance of carbon, hydrogen, and oxygen.

Figure 27. Example of a Biochemistry Study Tips slide.

Some Pearson Curriculum courses with the DCIM use a slide for Review, one for Reflect, and one for Study Tips. Other courses have all three items on one slide that requires more scrolling. There are also a variety of approaches for reflection.

Teachers often reinforce the Reflect and Study Tips stage by holding synchronous sessions enabling students to better prepare for the unit test. Many teachers also prepare study guides for their students. Some of these require students to complete a list of questions as part of their review work, submitting it as Sample Work for credit that helps with the final unit grade.

## Evaluate

The Evaluate phase of the DCIM measures what has been learned at the end of a unit and is most often used for reporting results in the form of a score or a grade. It evaluates learning, skill acquisition, and academic achievement at the conclusion of a defined period of instruction and is a demonstration of progress against the learning objectives.

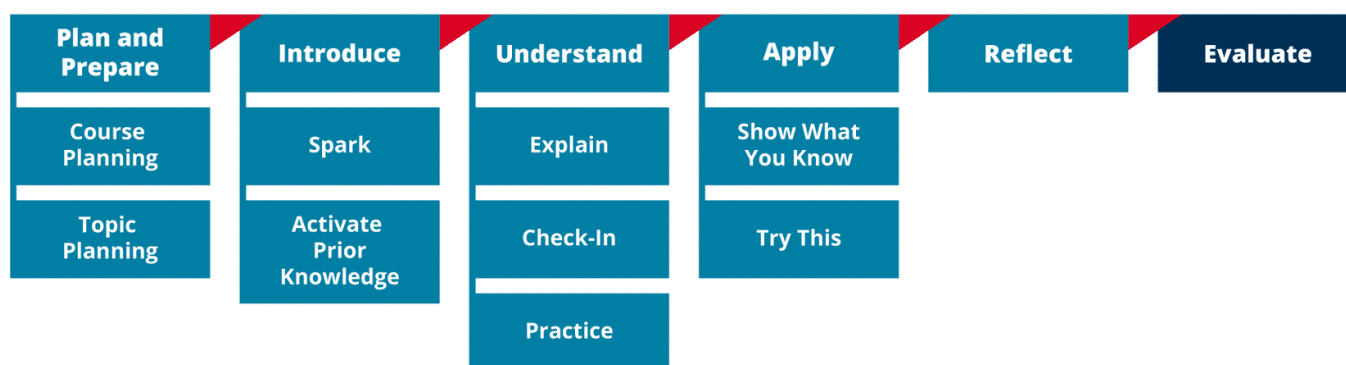


Figure 28. The Dynamic Classroom Instructional Model highlighting the Evaluate phase.

## Summative Assessment at Unit End

While the Evaluate phase is at the end of a unit and is often named Unit Test, there are multiple ways to assess progress throughout the Pearson Curriculum course with the DCIM. The table below summarizes the wide range of assessments found in a DCIM course.

Assessment Type	Description
Quick Check	<ul style="list-style-type: none"><li>• Noncumulative assessments added to the end of most lessons</li></ul>

Assessment Type	Description
	<ul style="list-style-type: none"> <li>• Includes the option to “Check Answer” before submission, in elementary grades only</li> <li>• Graded and weighted</li> <li>• Auto-scored</li> <li>• Usually contains 3–5 multiple choice items</li> <li>• Used in all courses and all grade levels</li> </ul>
Online Practice	<ul style="list-style-type: none"> <li>• Cumulative assessments added to the end of each unit</li> <li>• Allows students to answer practice questions at the end of a unit so they can measure their own grasp of a subject or concept prior to taking the Unit Test</li> <li>• Includes the option to “Check Answer” before submission</li> <li>• Graded but unweighted</li> <li>• Auto-scored</li> </ul>
Unit Test	<ul style="list-style-type: none"> <li>• Cumulative assessments added to the end of each unit</li> <li>• Contains a variety of question types (mix of auto- and human-scored)</li> <li>• Human-scored items may be accompanied by grading guidelines or a rubric</li> <li>• Used in all courses and all grade levels</li> <li>• Graded and weighted</li> </ul>
Discussion	<ul style="list-style-type: none"> <li>• Allows students in the same section to communicate with each other during a semester</li> <li>• Discussion window remains open throughout the semester</li> <li>• Graded and weighted</li> <li>• Accompanied by guidelines and a rubric</li> </ul>
Portfolio	<ul style="list-style-type: none"> <li>• Requires students to submit large pieces of work (e.g., labs, essays, presentations, reports, graphic organizers)</li> <li>• Graded and weighted</li> <li>• Submitted through a drop box</li> <li>• Accompanied by a rubric</li> </ul>
Sample Work	<ul style="list-style-type: none"> <li>• Allows teachers to monitor students’ work</li> <li>• Use determined by the teacher</li> <li>• May be graded or ungraded, weighted or unweighted</li> <li>• Submitted through a drop box</li> <li>• May be accompanied by a rubric</li> </ul>
Draft	<ul style="list-style-type: none"> <li>• Allows teachers to monitor students’ work</li> <li>• Graded and weighted</li> <li>• Submitted through a drop box</li> <li>• Accompanied by the same rubric as the main assignment</li> <li>• Primarily used in ELA courses</li> </ul>
Skills Check	<ul style="list-style-type: none"> <li>• Used in ELA K-2 by Learning Coaches to keep the teacher updated on the student’s progress with specific learning goals</li> <li>• Graded but unweighted</li> <li>• Auto-scored</li> </ul>
Participation	<ul style="list-style-type: none"> <li>• Typically accounts for 5% of a student’s overall grade</li> <li>• Requirements to earn full participation credit for a course are determined by each school</li> <li>• Can be inserted into specific courses with synchronous learning requirements</li> </ul>

Assessment Type	Description
Semester Review Online Practice	<ul style="list-style-type: none"> <li>• Cumulative assessments added to the end of each high school course (separate assessments needed for Semester A and Semester B)</li> <li>• Allows students to answer practice questions at the end of a semester so they can measure their own grasp of a subject or concept prior to taking the Semester Exam</li> <li>• Includes the option to “Check Answer” before submission</li> <li>• Graded but unweighted</li> <li>• Auto-scored</li> </ul>
Semester Exam	<ul style="list-style-type: none"> <li>• Cumulative assessments added to the end of each high school course (separate assessments needed for Semester A and Semester B)</li> <li>• Auto-scored</li> <li>• Graded and weighted as a test</li> </ul>

Table 3. Assessment types.

## Professional Development Discussion Topics for Unit 2

- As a virtual teacher, what are some ways that you can understand whether a student is ready to move forward into a new unit at the introductory point of Activate Prior Knowledge?
- Given that a lesson has an iterative pattern with Explain, Check-In, and Practice repeating, is there any part of this pattern that you feel could be enhanced with teacher modification?
- Based on experience and what you have learned from the DCIM course and DCIM Playbook, what active role might you take during the Plan and Prepare phase? What would that look like

## Unit 3: Lesson Construction

### Key Words:

**Content Bundle** – A content bundle is a bundle of content presentation, Check-Ins, and Practice items that are combined based on a single learning objective. It generally is meant to last no more than 20 minutes.

**Narrative Approach** – The narrative model presents the learning content in a traditional, straightforward manner, such as direct instruction.

**Peer Model Approach** – In this learning approach, there will be a peer model video, possibly with some additional content, to explain the new concept from the learning objective.

**21st Century Skills Approach** – This approach might merge a concept with a way to think or talk about that concept (communication). It requires learners to solve a problem or resolve an issue

using prior knowledge and the new concept (critical thinking). It could include digital tools for learners to explore.

## Three Learning Approaches

The Pearson Curriculum with the DCIM uses one of three learning approaches to deliver content in each of the iterative content bundles. These approaches are the narrative learning approach, the peer model learning approach, and the 21st century skills learning approach.

<b>Narrative</b>	<b>Peer Model</b>	<b>21st Century Skills</b>
<ul style="list-style-type: none"> <li>• Traditional content presentation</li> <li>• Text or media-based direct explanation of a concept</li> <li>• One learning objective per content bundle</li> </ul>	<ul style="list-style-type: none"> <li>• Content delivered by a video of peer(s) discussing and providing new information about the topic</li> <li>• One learning objective per content bundle</li> </ul>	<ul style="list-style-type: none"> <li>• Traditional content presentation, but it highlights a 21st century skill <a href="#">Framework Definitions document</a></li> <li>• Text or media-based direct explanation of a concept</li> <li>• May be more problem-solving oriented or emphasize more critical thinking</li> <li>• One learning objective per content bundle</li> </ul>

*Table 4. Learning approaches in the DCIM.*

### Narrative Approach

The narrative model presents the learning content in a traditional straightforward manner, like direct instruction. When the narrative learning approach is applied to the Explain part of the Understand cycle, its purpose is the presentation of new concepts and skills that build upon a student's prior knowledge and help make connections with new learnings. Explain, in the narrative approach, will be similar to most of Pearson's legacy lessons in terms of content presentation. Students are most familiar with this style. It will feature a text or media-based direct explanation of a concept or a discovery-inquiry-type activity.

## Peer Model Approach

In this type of learning approach, there is a peer model video to explain the new concept from the learning objective. There could be some written content along with the video.



*Figure 29. Example of how a peer model video appears in a content bundle.*

Research suggests that learning from a peer can be effective and powerful for students. In this type of approach, there will be a peer model video to explain the new concept from the learning objective. Depending on the age and subject, the video takes different forms.

Although referring to post-secondary education, research out of Michigan State was published in the *International Journal of Educational Research* (Shin, Ranellucci, & Roseth, 2017) that captures the rationale which led to this learning approach for our Pearson Curriculum: "These findings suggest that what instructors were good at was getting across cold facts, while the peers seemed to be tapping into an identification process," said study co-author Cary Roseth, associate professor of educational psychology. "In other words, as a student, I can identify with my peers and imagine myself using the course material in the same way they do. This gives the material meaning and a sense of purpose that goes beyond memorization."

The peer model approach follows the same three cycles of Understand (Explain, Check-In, and Practice) and centers around the same learning objective, but it tackles the objective differently. Here, the learner will watch a video of learners their age discussing and providing the new information of Explain. Depending on the age and discipline, these videos will take different forms:

- a think-aloud video of a learner explaining the concept in a user-friendly way
- a video with two or more people discussing or debating, allowing learners to watch and form their own opinions and provide responses
- videos or transcripts of people with various points of view that give the learner a way to think about and analyze a concept by considering multiple perspectives

- two or more learners (or a learner and Learning Coach where appropriate) working on a discovery or inquiry activity, drawing on prior knowledge to explore the target concept

## 21st Century Skills Approach

In their article published in the *Journal of Education and Practice* (2015), researchers Halah Ahmed Alismail and Dr. Patrick McGuire summarized, “Students need 21st century skills in order to improve their achievement and promote cognitive processes and the construction of knowledge that prepares them to be successful in their future careers. As a result, teachers should apply different strategies and methods for teaching these skills because there is not one specific strategy or model to achieve this goal.”

The Partnership for 21st Century Skills highlights the following skill areas for development in a 21st century curriculum:

- creativity and innovation
- critical thinking and problem solving
- communication and collaboration
- information, media, and technology skills
- information literacy
- media literacy
- life and career skills
- flexibility and adaptability
- initiative and self-direction
- social and cross-cultural skills
- productivity and accountability
- leadership and responsibility

Each Explain, Check-In, and Practice content bundle using the 21st century skills learning approach pulls skills from areas provided in the Partnership for 21st Century Skills list.

### *Teacher Tip for Understanding*

The integration of 21st century skills into the content bundle is subtle. The skills may be mentioned but not identified as 21st century skills. Previewing these 21st century skill bundles is helpful so teachers can highlight the skills and extend the concepts during discussion regarding how these skills may be used throughout life.

## Exceptions to the Rule

There are times when the content bundles do not use more than one type of learning approach in a lesson. Some topics require more narrative content bundles to present the content in the best manner.

# Building a Typical Lesson in the Understand Phase

In general, a lesson is approximately one hour. Within that hour, there may be three bundles of content. Each bundle is about 20 minutes long (some may be longer) and addresses one learning objective, with one type of learning approach. A Quick Check generally concludes the lesson.

## A Typical Lesson Using the DCIM

Note: Each bundle is for one learning objective.

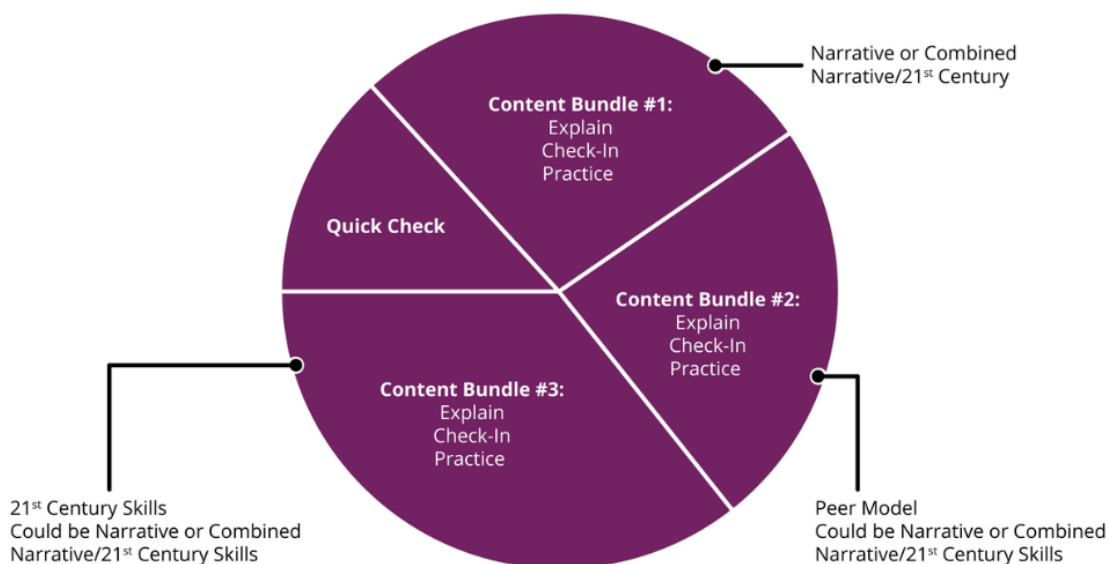


Figure 30. A typical lesson in the Understand phase of the DCIM, comprised of multiple content bundles.

While not all lessons use a narrative learning approach for the first content bundle (most common), the peer model learning approach for the second bundle, and the 21st century skills learning approach for the third bundle, there are many lessons that do follow this pattern. There are times when a lesson is made with only narrative content bundles that may repeat several times to cover the content that works best with that traditional type of treatment.

## Other Types of Lessons

There are other types of lessons in the course outline, but they are of a different nature. Examples of these are a unit introduction, the Apply lesson, and portfolios. These types of lessons generally use a narrative approach.

## Use of Materials

Printable or physical materials may be included in courses at the elementary school level. Examples include leveled readers for grades 1-5, emergent readers in kindergarten (all stories are printed in bound books), handwriting workbooks for ELA K-2, and reproducible worksheets for kindergarten. Science K-2 and Math K-2 will also have physical material kits delivered.

There are no printable or physical materials used in middle or high school.

## Professional Development Discussion Topic for Unit 3

How can you highlight the 21st century skills that may be integrated (but not obvious) in a content bundle using the 21st century skills approach? What might you do to enhance the learning of 21st century skills?

# Unit 4: Integrated Threads

## Introduction to Pearson Curriculum Threads

If you were asked to describe the essence of who you are, it is unlikely that you would only think of yourself in terms of your academic achievement. You are so much more that involves how you think, how you relate to others, how you build relationships, how you communicate, and how you approach life and problems, to name just a few things! There are many factors that make up who you are by identity and how you make sense of the world around you.

There may be several themes that run through the story of your life. From these themes, there are skills and competencies you draw from that go beyond your education. There are four main themes, or threads, that should be woven through the academic experience to support the growth of the whole student and extend to the community at large. These threads include social and emotional learning (SEL), growth mindset, 21st century skills, and support for diversity, equity, and inclusion (DE&I). It is the Dynamic Classroom Teacher's role to recognize the threads that may be found in any of the academic subjects and weave them into synchronous sessions, student-teacher relationship building, and other opportunities where students will benefit from this personalized approach to their learning.

## Social and Emotional Learning (SEL)

### ***What is Social and Emotional Learning?***

The Collaborative for Academic, Social, and Emotional Learning (CASEL) defines SEL as:

- an integral part of education and human development
- the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to
  - develop healthy identities
  - manage emotions and achieve personal and collective goals
  - feel and show empathy for others
  - establish and maintain supportive relationships, and
  - make responsible and caring decisions



Social and emotional learning uses teaching methods and practices to positively influence learning outcomes and lifelong success. It builds healthy attitudes, habits of setting and achieving goals, and positive social interactions.

CASEL is a trusted source for knowledge about high-quality, evidence-based social and emotional learning. CASEL supports educators and policy leaders, and educators are encouraged to visit [CASEL's website](#) and explore their many resources.

The following image of [CASEL's SEL Framework](#) demonstrates how these areas are promoted across each level:

### CASEL'S SEL FRAMEWORK: What Are the Core Competence Areas and Where Are They Promoted?

**Social and emotional learning (SEL) is an integral part of education and human development.** SEL is the process through which all young people and adults acquire and apply the knowledge, skills, and attitudes to develop healthy identities, manage emotions and achieve personal and collective goals, feel and show empathy for others, establish and maintain supportive relationships, and make responsible and caring decisions.

SEL advances educational equity and excellence through authentic school-family-community partnerships to establish learning environments and experiences that feature trusting and collaborative relationships, rigorous and meaningful curriculum and instruction, and ongoing evaluation. SEL can help address various forms of inequity and empower young people and adults to co-create thriving schools and contribute to safe, healthy, and just communities.



Learn more: [www.casel.org/what-is-SEL](http://www.casel.org/what-is-SEL)

Figure 31. Image of CASEL's SEL Framework.

## SEL and the Pearson Curriculum with the DCIM

With the launch of the new Pearson Curriculum using the DCIM, SEL was included as isolated student lessons that proved ineffective. These are being discontinued. New courses coming out for the 2022–2023 school year will no longer have the SEL lessons in them. Existing courses may or may not still have these lessons. These lessons will be removed by the 2023-2024 school year.

If your course still has SEL lessons in each unit introduction, you may:

1. Let your students know that the lesson is not required but that they may find the lessons interesting.
2. Look at the SEL skill covered and consider ways to integrate the topic into your teaching.

### ***Integrating SEL as a Teacher***

There is a continuum of effort that the teacher may engage in to reinforce SEL concepts as part of academic instruction. On the most basic level, you can mindfully integrate the five SEL skill areas into your teaching: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making. The table below provides some recommendations for supporting student social and emotional growth while working within the Pearson Curriculum with the DCIM.

<b>Self-Awareness</b>	<b>Self-Management</b>	<b>Social Awareness</b>	<b>Relationship Skills</b>	<b>Responsible Decision-Making</b>
Listen deeply to what students say and reflect what you heard about their feelings.	Give students age-appropriate support and/or authentic praise for expressing emotions appropriately.	Routinely talk about how others feel in different situations.	Teach lessons on how to give and receive constructive feedback.	Explicitly identify steps for solving a problem. Walk through the steps of problem-solving in response to hypothetical situations.
Routinely ask questions in age-appropriate ways when students are experiencing different feelings to help them identify and express those feelings.	Define "perseverance" as a vocabulary word.	Model respect and enthusiasm for learning about diversity.	Teach lessons on communication skills (such as listening, looking at the person, tone of voice).	Define responsibility and related terms (ethical, safe, values, honesty).
Routinely talk about physical and emotional cues that tell us how we're feeling in different situations in age-appropriate ways.	Routinely model and talk about your own goals.	Routinely ask questions in different situations that make the point that we all are similar, and we all are different.	Establish class or morning meetings that give students the opportunity to interact with each other and practice speaking and listening skills.	Teach students a formula for making good decisions (e.g., stop, calm down, identify the problem, consider the alternatives, make a choice,

<b>Self-Awareness</b>	<b>Self-Management</b>	<b>Social Awareness</b>	<b>Relationship Skills</b>	<b>Responsible Decision-Making</b>
				try it out, re-evaluate.)
Provide age-appropriate authentic feedback and ask open-ended questions that invite students to engage in deeper reflection about their strengths and interests.	Help students think through and suggest alternatives when students encounter challenges.	Model concern for the well-being of others.	Teach lessons on how to be assertive (and not aggressive).	
		Routinely remind students in developmentally appropriate ways when they need help to think about the resources (formal and informal) that are available to them.		

*Table 5. Online teacher actions for support of student social and emotional growth.*

## Additional SEL Resources

[CASEL's Resource Library](#)

[Edutopia](#)

[SEL4US](#)

## 21st Century Skills

Since we know that 21st century skills are one of the learning approaches, why is it listed here as a thread?

The 21st century skills are used not only in lesson construction. They represent an approach to learning, either in the formalized school setting or outside of the academic arena, that is meant to prepare students for the quick-changing reality of the world after graduation. These skills are so important that they should be recognized by teachers and Learning Coaches as discussion topics and ways to think about learning in general. For this reason, we encourage educators to infuse them into their interactions during both synchronous and asynchronous learning opportunities.

## **Partnership for 21st Century Learning**

The Partnership for 21st Century Skills (P21) is a collection of businesses, foundations, and educator organizations focused on preparing students with the skills they need to succeed in modern careers and advocating for the integration of skills into the teaching of core academic subjects. They are champions of the 4Cs (critical thinking, communication, collaboration, and creativity). More information may be found at [BattelleforKids.org](https://www.battelleforkids.org).

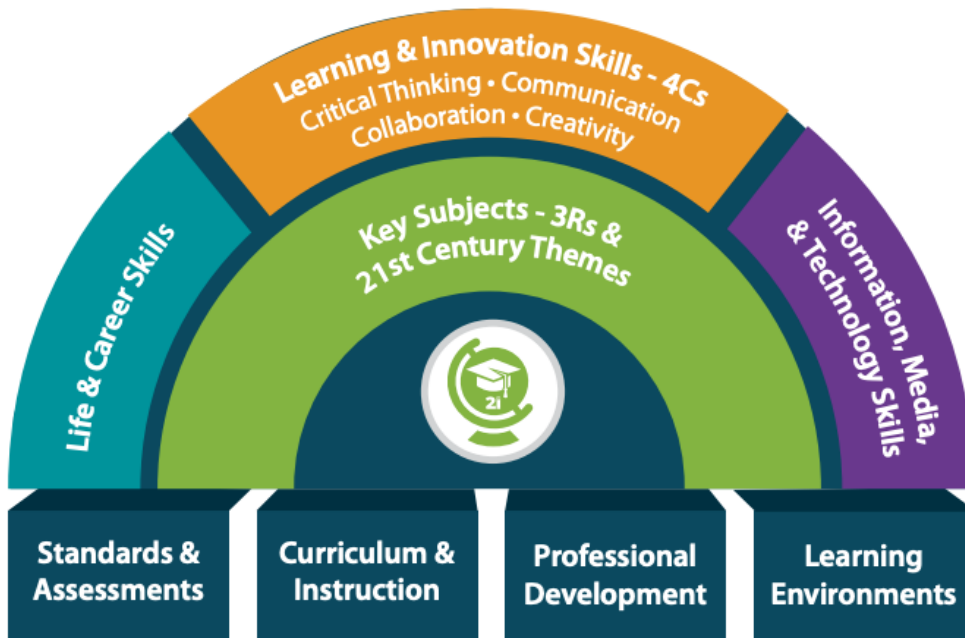
## ***Framework for 21st Century Learning***

P21 has a Framework for 21st Century Learning that includes a helpful graphic with detailed explanation. While the image for the Framework appears here, please use the link to review the two-page helpful PDF that goes with the image for the [Framework for 21st Century Learning](#). The PDF provides information about the following:

- key subjects and 21st century themes
- learning and innovation skills
- information, media, and technology skills
- life and career skills

## Framework for 21st Century Learning

A unified vision for learning to ensure student success in a world where change is constant and learning never stops.



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Figure 32. Image of P21's Framework for 21st Century Learning.

## Growth Mindset

A growth mindset is a belief that most basic abilities can be developed through dedication and hard work rather than limited by fixed intelligence and talent. From a teaching perspective, there are two important ways of thinking about mindset. One has to do with the way a teacher provides feedback, and the other has to do with the teacher's own mindset.

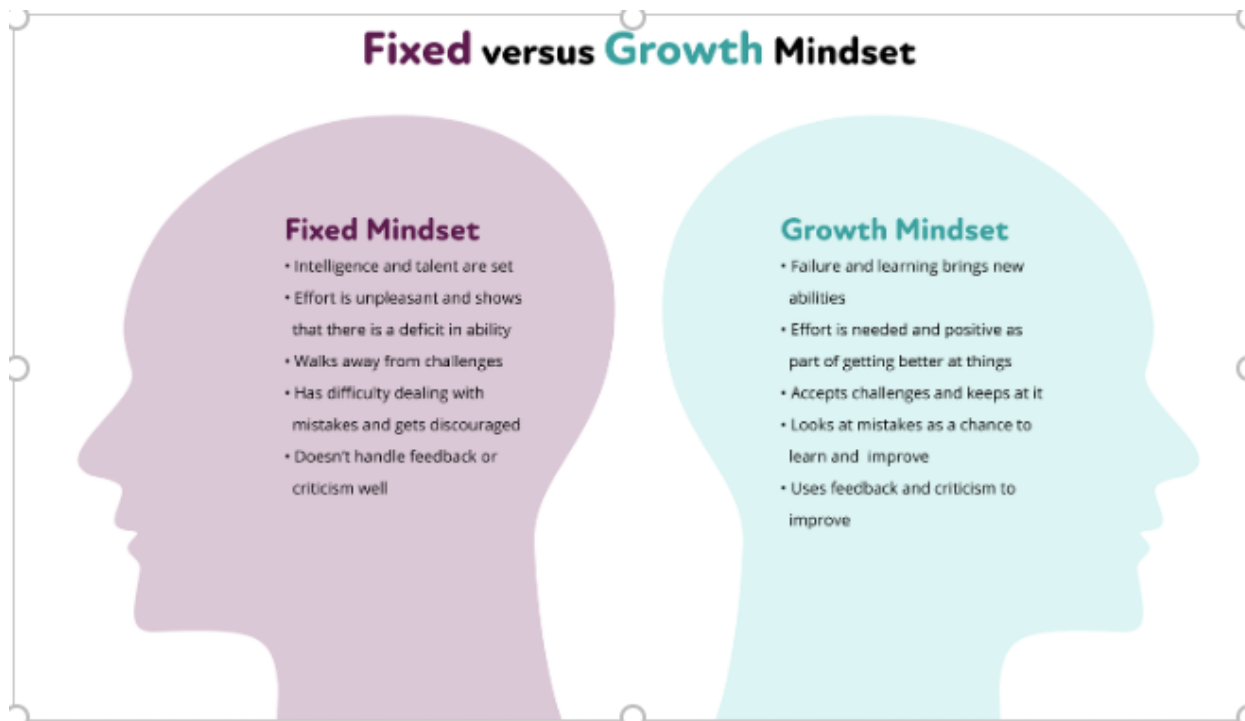


Figure 33. Characteristics of a fixed versus growth mindset.

From a teaching perspective, there are two important ways of thinking about mindset. One has to do with the way a teacher provides feedback, and the other has to do with the teacher's own mindset.

In terms of feedback and praise:

- focus on the effort and not the talent/intelligence
- use a strategic focus to help students take on challenges

Research has shown that, for students, praise for intelligence led to less persistence, less performance, and less gratification with the task. Praising for effort showed that students worked harder as the tasks got harder.

***Did you know?***

A teacher with a fixed mindset may have empathic responses and provide easier work, particularly in math. This reaction has the opposite effect on motivation. When coached for strategies on how to attack difficult work, student achievement improved.

## Diversity, Equity, and Inclusion (DE&I)

To accomplish the vision in the new Pearson Curriculum, Pearson created a variety of guidelines that establish an evolution of thinking about building content that better embraces diversity, equity, and inclusion. Images of people are tracked to ensure equitable representation of the families we serve. Additionally, all content is created to address these challenges:

- avoiding underrepresentation
- avoiding stereotyping, both negative and positive
- ensuring that stories of historically marginalized people and events are told
- recognizing the capacity and agency of people, and the systemic barriers that create injustice

## What do the DE&I changes in Pearson Curriculum mean for schools and Dynamic Classroom Teachers?

New and revised courses follow four DE&I policy principles. These same four principles apply to how schools and teachers can work to support the policy. Dynamic Classroom Teachers can use these examples for both practice implementation and in response to student and family questions. Read this information carefully as it clearly describes what should be part of the school, Dynamic Classroom, and Dynamic Classroom Teacher practice.

<b>Policy Principle</b>	<b>Schools will receive curriculum that ...</b>	<b>School leaders and teachers should...</b>
Respect for Human Rights	... is free of discrimination and bias based on age, ability, gender, race, culture, language, socioeconomic status, and other protected characteristics	... <b>engage</b> with students and families in ways that are free of discrimination and bias based on age, ability, gender, race, culture, language, socioeconomic status, and other protected characteristics
Commitment to Diversity, Equity, and Inclusion	... represents communities and identities of every person ... highlights lives and contributions of all groups of people, ensuring inclusion of diverse and historically marginalized communities ... recognizes the capacity and agency of individual people, as well as systemic, structural, and institutional barriers	... <b>ensure</b> that synchronous sessions and teaching interactions represent communities and identities of every person ... <b>enhance</b> lessons by highlighting lives and contributions of all groups of people, ensuring inclusion of diverse and historically marginalized communities ... <b>seek to</b> understand and support the capacity and agency of individual people, being aware of long-standing effects of systemic, structural, and institutional barriers
Learning Based on Evidence and Facts	... is globally referenced and culturally relevant ... demonstrates factuality and respect for truth ... complies with local standards, laws, and customs ... uses appropriate language as it evolves	... <b>emphasize</b> how learning is connected to global issues and <b>endorse</b> culturally relevant examples ... <b>ground</b> all learning experiences in fact and truth ... <b>comply</b> with local standards, laws, and customs

<b>Policy Principle</b>	<b>Schools will receive curriculum that ...</b>	<b>School leaders and teachers should...</b>
		... <b>use</b> appropriate language as it evolves
Content that is Legal and Ethical	... is accurate, ethical, equitable, impartial, and trustworthy  ... aligns with intellectual property rights	... <b>choose</b> auxiliary materials that are accurate, ethical, equitable, impartial, and trustworthy  ... <b>abide by</b> intellectual property rights

*Table 6. DE&I policy principles for curriculum and meaning for schools and teachers.*

## Professional Development Discussion Topics for Unit 4

- Four threads were reviewed in Unit 4. These were SEL, 21st century skills, growth mindset, and DE&I. All four of these threads are related to reflective personal and social areas. The teacher plays an important role in guiding students (and themselves) towards better adoption of each area's implications. Consider the four threads and think about what you might need to do differently to support growth in your students and yourself. Be ready to share and question in a collaborative setting.
- What are some actions that teachers can take to support DE&I from a curricular perspective?

# Unit 5: Assessment Strategy for the Pearson Curriculum Course Using the DCIM

## Depth of Knowledge (DOK) Approach

In the Depth of Knowledge (DOK) approach, each assessment question written in the Pearson Curriculum is assigned a DOK based on the specific verb used in the learning objective.

### **DOK Level 1: Recall**

Purpose: Level 1 questions require students to recall or reproduce knowledge in a rote manner. This includes recall of information, such as a fact, definition, term, or a simple procedure. A student answering a Level 1 item either knows the answer or does not; that is, the answer does not need to be "figured out" or "solved."

Question words/verbs: who, what, where, when, why, identify, match, define, label, list, state, tell, name, arrange



Example: List five animals that are mammals.

## **DOK Level 2: Skill/Concept**

Purpose: Level 2 questions focus on the use of skills or concepts. Students must apply content practices, principles, or processes. These questions require the engagement of some mental process beyond recalling or reproducing a response.

Verbs: infer, categorize, construct, predict, interpret, distinguish, compare and contrast, classify, summarize, estimate, show, relate, graph

Example: Construct a histogram of the data.

## **DOK Level 3: Strategic Thinking**

Purpose: Level 3 questions require strategic thinking and problem solving that necessitate deep knowledge, reasoning, planning, and evidence to support results. Students must explain and justify their thinking.

Verbs: assess, compare, investigate, differentiate, cite evidence, draw conclusions, formulate, hypothesize, critique, revise

Example: Is toothpaste a solid or a liquid? Explain and justify your answer.

## **DOK Level 4: Extended Thinking**

Purpose: Level 4 tasks expand beyond the topic and ask, "What else?". The purpose is knowledge augmentation and transfer. They are typically project-based or problem-based learning activities that evaluate impacts across the curriculum and beyond the classroom.

Verbs: design, connect, synthesize, analyze, create, prove

Example: Analyze and synthesize information about the 2016 presidential election from multiple sources.

It is possible for the same verb to be used at different DOK levels. In these cases, you will need to analyze the question to determine the proper DOK.

DOK Level 1 – Describe the characteristics of a solid. (simple recall)

DOK Level 2 – Describe the difference between a solid and a liquid. (requires cognitive processing to determine the differences between two types of matter)

DOK Level 3 – Describe a process that would turn a solid into a liquid. (requires a deeper understanding of types of matter)

## Assessment Types in the Pearson Curriculum with the DCIM

The table that follows is a high-level outline containing information about where assessments are used, how many questions an assessment should have, how the assessment is scored, the level of difficulty of the assessment, and the total point value of the assessment. Information is broken down based on the type of assessment and the course grade band.

Assessment Type	Description
Quick Check	<ul style="list-style-type: none"> <li>• non-cumulative assessments added to the end of most lessons</li> <li>• includes the option to “Check Answer” before submission in elementary grades only</li> <li>• graded and weighted</li> <li>• auto-scored</li> <li>• usually 3–5 multiple choice items</li> <li>• used in all courses and all grade levels</li> </ul>
Online Practice	<ul style="list-style-type: none"> <li>• cumulative assessments added to the end of each unit</li> <li>• allows students to answer practice questions at the end of a unit so they can measure their own grasp of a subject or concept prior to taking the unit test</li> <li>• includes the option to “Check Answer” before submission</li> <li>• graded but unweighted</li> <li>• auto-scored</li> </ul>
Unit Test	<ul style="list-style-type: none"> <li>• cumulative assessments added to the end of each unit</li> <li>• contains a variety of question types (mix of auto and human scored)</li> <li>• human-scored items may be accompanied by grading guidelines or a rubric</li> <li>• used in all courses and all grade levels</li> <li>• graded and weighted</li> </ul>
Discussion	<ul style="list-style-type: none"> <li>• allows students in the same section to communicate with each other during a semester</li> <li>• discussion window remains open throughout the semester</li> <li>• graded and weighted</li> <li>• accompanied by guidelines and a rubric</li> </ul>

Assessment Type	Description
Portfolio	<ul style="list-style-type: none"> <li>• requires students to submit large pieces of work (e.g., labs, essays, presentations, reports, graphic organizers, etc.)</li> <li>• graded and weighted</li> <li>• submitted through a drop box</li> <li>• accompanied by a rubric</li> </ul>
Sample Work	<ul style="list-style-type: none"> <li>• allows teachers to monitor students' work</li> <li>• use determined by teacher</li> <li>• may be graded or ungraded, weighted or unweighted</li> <li>• submitted through a drop box</li> <li>• may be accompanied by a rubric</li> </ul>
Draft	<ul style="list-style-type: none"> <li>• allows teachers to monitor students' work</li> <li>• graded and weighted</li> <li>• submitted through a drop box</li> <li>• accompanied by the same rubric as the main assignment</li> <li>• primarily used in ELA courses</li> </ul>
Skills Check	<ul style="list-style-type: none"> <li>• used in ELA K-2 as a way for learning coaches to keep the teacher updated on the student's progress with specific learning objectives</li> <li>• graded but unweighted</li> <li>• auto scored</li> </ul>
Participation	<ul style="list-style-type: none"> <li>• typically accounts for 5% of a student's overall grade</li> <li>• requirements to earn full participation credit for a course are determined by each school</li> <li>• can be inserted into specific courses with synchronous learning requirements</li> </ul>
Semester Review Online Practice	<ul style="list-style-type: none"> <li>• cumulative assessments added to the end of each high school course (separate assessments needed for Semester A and Semester B)</li> <li>• allows students to answer practice questions at the end of a semester so they can measure their own grasp of a subject or concept prior to taking the Semester Exam</li> <li>• includes the option to "Check Answer" before submission</li> <li>• graded but unweighted</li> <li>• auto scored</li> </ul>
Semester Exam	<ul style="list-style-type: none"> <li>• cumulative assessments added to the end of each high school course (separate assessments needed for Semester A and Semester B)</li> <li>• auto scored</li> </ul>

Assessment Type	Description
	<ul style="list-style-type: none"> <li>• graded and weighted as a test</li> </ul>

Table 7. Description of assessment types.

## The Apply Portion of a Unit

In the DCIM, each unit has an Apply portion near the close of the unit to give students an opportunity to apply what they have learned. The Apply portion itself is not an assessment, but it sometimes contains an assessment. Often, the Apply portion will be its own lesson but it will not contain any official assessment. Other times, the Apply portion of a lesson could be a portfolio or a discussion assessment.

## Item Types

There are a range of item types in the Pearson Curriculum. The following types are auto-scored:

- multiple choice (standard and multiple response)
- true or false
- choice matrix
- cloze with drag & drop
- cloze with a drop-down list
- label image with drag & drop, or drop-down list
- classification
- match list
- order list
- hotspot
- math formula
- chemistry formula

Note that items with the word “cloze” are items with a portion of language with certain items, words, or signs removed where the student is asked to replace the missing language item. Also, hotspot items typically ask the student to click on a spot on an image as the correct answer.

The following types of assessment items are human scored:

- audio recorder
- essay with rich text
- file upload

## **A Word About Distractor Rationales**

Every auto-scored item on all assessments is accompanied by a distractor rationale. Distractor rationales are hints shown to the student when they select an answer. The distractor rationale for the selected answer option will appear to students in the following ways:

- after checking “Check answer” on Online Practices and elementary Quick Checks
- after submission on all other assessments

## Grading Guidelines

### Essay Items

Essay items are set to either two or four points, in accordance with their aligning rubric. The expected response length for essay items is one to two sentences for two-point items or three to five sentences (one paragraph) for four-point items.

Grading guidelines are in the Sample Answer field. The format can include one of the following:

- additional verbiage specifying what a question clearly answered should include (e.g., "Student answers should include..." or "The student should explain...")
- a concrete answer such as the correct equation (this type of grading guideline is used more frequently in math and science courses)

### Example

A farmer in a tropical rainforest climate currently grows tea. The farmer is debating whether to use intercropping to grow both rubber and tea. In three to five sentences, analyze the costs and benefits of adopting this sustainable farming practice.

Student answers should include benefits of intercropping, including protection of the soil, increased biodiversity, opportunity to grow multiple crops, decreased deforestation, and increased carbon storage. Student answers should also include costs of intercropping, including potentially decreased yield, increased resource costs, and delayed results.

### Short Answer Rubric

The following rubric will be used for all two-point essay items:

#### Two-Point Rubric, General

Points Awarded	Criteria
2	The answer is very clear. The answer is fully supported by details. There may be a few errors in grammar, usage, or mechanics. Errors do not interfere with meaning.
1	The answer is somewhat clear. Details are weak or not related. There are some errors in grammar, usage, and mechanics. Errors interfere with meaning.
0	The question is not answered.

*Table 8. 2-point rubric, general.*

The following rubric will be used for all four-point essay items:

#### Four-Point Rubric, General

<b>Points Awarded</b>	<b>Criteria</b>
4	The answer is very clear. The answer is fully supported by details. There may be a few errors in grammar, usage, or mechanics. Errors do not interfere with meaning.
3	The answer is mostly clear. The answer is supported by mostly relevant details. There are a few errors in grammar, usage, or mechanics. Errors do not interfere with meaning.
2	The answer is somewhat clear. Details are weak or not related. There are some errors in grammar, usage, and mechanics. Errors interfere with meaning.
1	The answer is not clear. There are few or no supporting details. There are many errors in grammar, usage, and mechanics. Errors interfere with meaning.
0	The question is not answered.

*Table 9. Four-point rubric, general.*

## **Portfolio Assessments**

### **Elementary Portfolio**

A portfolio activity is a package of learning bundles that include Explain, Check-In, and Practice that culminate in a performance activity for students, submitted for teacher grading. Portfolios may be sequenced and dependent on each other. A portfolio may act as the Apply component of a unit, but the Apply component of a unit will not always be a portfolio activity.

At the elementary level (for all courses other than elementary language arts), the number of days for a portfolio activity defines the number of content bundles that make up that portfolio. For elementary language arts, students work on portfolios (which are formal written compositions) over the duration of several weeks. There will only be one content bundle formally identified as a portfolio (the final one) and during this lesson, students will submit their portfolio via a drop box.

Because a portfolio is a package of sequenced interdependent content bundles, the first bundle of the package should introduce the portfolio activity and the last bundle of the package should contain a brief reflection about the portfolio activity.

The screenshot that follows shows a unit course outline from a Science 4A course and the number of lessons dedicated to portfolio work.

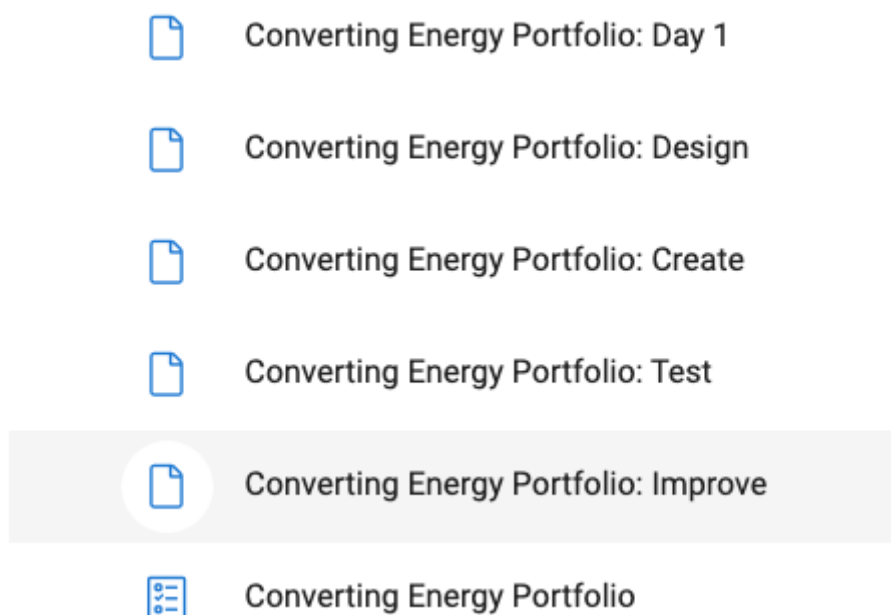


Figure 34. Course tree showing lessons 10-15 as portfolio lessons.

## Secondary Portfolios for Science, ELA, and Social Studies

A portfolio in secondary Science, ELA, and Social Studies consists of a collection of sequenced and interdependent content bundles, each with their own learning objective and assigned learning approach of narrative, peer model, or 21st century skills.

- The first learning object of the portfolio should be a portfolio introduction.
- The last should be a portfolio reflection.
- The content bundles within the portfolio collection are structured with Explain, Check-In, and Practice sections, like standard content bundles. However, within a portfolio the content bundles may refer to each other and not be independent.
- Rubrics for these portfolios should be unique to the assignment.

The images that follow are a unit course outline in a Biology A course and the number of lessons dedicated to portfolio work for Platform A, then Platform B

# Course Outline

★ indicates lesson notes     indicates lesson intro page

## 5. Cell Work

1. Cell Work Unit Introduction
2. Photosynthesis Quick Check
3. Photosynthesis: Energy Conversion Quick Check
4. Photosynthesis Portfolio 1
5. Photosynthesis Portfolio 2
6. Photosynthesis Portfolio 3 Portfolio Item

Figure 35. Course outline showing biology unit portfolio lessons from Platform A.







-  Converting Energy Portfolio: Day 1
-  Converting Energy Portfolio: Design
-  Converting Energy Portfolio: Create
-  Converting Energy Portfolio: Test
-  Converting Energy Portfolio: Improve
-  Converting Energy Portfolio

Figure 36. Course outline showing Science 4A unit portfolio lessons from Platform B.

## Discussion Assessments

There are generic discussion rubrics for elementary courses and secondary courses.

### Elementary Discussions

Students are assessed based on a rubric in which the focus is on the thoughtful quality of the response to the discussion prompt and to other students.

A discussion is intended to provide students an opportunity for meaningful interaction with classmates. Discussions may be used in two ways, as the assessment for a content bundle, or as the targeted activity of the Apply component.



Elementary discussions have a brief prompt. Unlike middle and high school discussions, elementary discussions are typically one content bundle. Prompts are limited to a few sentences and very distinctly indicated as the prompt.

## Secondary Discussions

Secondary discussion assessments allow students in the same section to communicate with each other during a semester. Key points about secondary discussions follow.

- Learning objectives assessed via a discussion do not have Quick Check assessment items.
- Discussion assessments are used to assess learning objectives at DOK Level 4. A good discussion prompt invites a variety of possible thoughtful responses with different points of view.
- Discussions have clear prompts. Prompts are limited to a few sentences and are distinctly indicated as the prompts.
- Discussion windows remain open throughout the semester so that students have plenty of opportunities to respond to each other.
- Discussions are graded and weighted.
- Discussions are accompanied by a rubric.

Discussion assessments may be included in the course in two ways: as the targeted activity of an Apply lesson or replacing a Quick Check following a standard lesson containing a set of content bundles addressing a single learning objective.

As part of an Apply lesson, the discussion will be the targeted activity in the Apply content bundle.

### SECONDARY DISCUSSION EXAMPLE

#### Introducing the Discussion

Think about what you know about responsibilities for conditions in a supply chain for a large company. For instance, making cell phones requires many different raw materials, and a number of steps for building component parts. A large company like Samsung or Apple subcontracts this work through other vendors. Should these companies be concerned about the working conditions and circumstances surrounding acquisition of these raw materials?

Read the following article about a copper mine spill catastrophe in Mexico.

Link: EBSCOhost

<http://search.ebscohost.com/>

1. Select EBSCOhost Research Databases.

2. Check the box for Select all, then select Continue.
3. Type "Mine Spill Devastates Mexican Farmers" in the search box, then select Search.
4. Select the article "Mine Spill Devastates Mexican Farmers" by Fernandez, Valeria.

### Preparing for the Discussion

You will engage in a discussion with your peers about the accountability of large companies for environmental impacts and social responsibilities along the supply chain. Be as thoughtful and respectful in a discussion board conversation as you would be in real life. Sharing your own ideas and listening to the ideas of others can deepen your understanding of the issues and help you look at this in a whole new way. In a discussion forum, you will do the following:

- Come to the discussion prepared.
- Support ideas with meaningful text evidence.
- Pose and respond to questions that connect the question to broader themes and ideas.
- Respond thoughtfully and respectfully to diverse perspectives.

To understand how you will be graded for this assignment, read the Discussion Guidelines and Rubric.

### Discussion Prompt

Begin the discussion by responding to the following prompt:

Copper, like cobalt, is an important metal in the making of smartphones. How should a company like Apple respond to learning about such an environmental mining disaster at a copper mine from which the company acquires material? Explain.

Post a detailed response to the Company Accountability Discussion prompt. Then respond to two classmates' posts.

Participate in the discussion to learn more about company accountability.

## Draft, Portfolio, and Sample Work Drop Boxes

Draft, portfolio, and sample work assessments are set up as activities with one single file upload item that functions as a drop box for a course.

### ***Suggested Grade Book Weights***

Pearson Curriculum courses using the DCIM have the following suggested grade book weights:  
K-2 Courses

<b>Grade Book Weight</b>	<b>Assessment Type</b>
0%	Online Practice

<b>Grade Book Weight</b>	<b>Assessment Type</b>
0%	Skills Check
20%	Quick Check
30%	Portfolio
45%	Test
5%	Participation
0%	Draft

*Table 10. K-2 Grade Book weights by assessment type.*

### 3-5 Courses

<b>Grade Book Weight</b>	<b>Assessment Type</b>
0%	Online Practice
15%	Quick Check
10%	Sample Work
25%	Portfolio
10%	Discussion
35%	Test
5%	Participation
0%	Draft

*Table 11. Grades 3-5 Grade Book weights by assessment type.*

### 6-12 Courses

<b>Grade Book Weight</b>	<b>Assessment Type</b>
0%	Online Practice
15%	Quick Check
10%	Sample Work
25%	Portfolio
10%	Discussion
35%	Test
5%	Participation

Grade Book Weight	Assessment Type
0%	Draft

Table 12. Grades 6–12 Grade Book weights by assessment type.

## Professional Development Discussion Topic for Unit 5

Become familiar with the different types of assessments and how they look within a Pearson Curriculum course using the DCIM. Are there areas that are unclear to you? Record your observations and questions in preparation for a professional development discussion.

# Unit 6: DCIM and Differences from Pearson Legacy Courses

If you look at a Pearson legacy course and a Pearson Curriculum course using the DCIM, side by side, your first reaction might be that they have the same appearance in the lesson viewer. The differences, however, are obvious as you begin to read the course outline and see the elements of the course. Additionally, the progression of slides is significantly different.

## Contrasting the Pearson Curriculum Courses using the DCIM with Pearson Legacy Courses

The table that follows summarizes the similarities and differences between the legacy and Pearson Curriculum with the DCIM courses. While the information is not exhaustive, it captures the standout differences.

Component	Legacy	Pearson Curriculum with DCIM
Lesson Pattern	There is a Getting Started slide with a “hook,” followed by Instruction slides, an Activity slide, a Review slide, and an Assessment slide.	There is an initial slide with the learning objective and key words, followed by an Explain slide (similar to legacy’s Instruction slide), a Check-In slide with answers, a Practice slide with feedback, and a Quick Check slide at the close of the lesson.  The lesson pattern generally repeats Explain, Check-In, and

Component	Legacy	Pearson Curriculum with DCIM
		Practice 2–3 times with a narrative, peer model, or 21st century learning approach.
Unit Level Beginning	There is a unit slide with objectives and lessons listed.	<p>There is a unit summary slide with lessons listed and no objectives.</p> <p>Courses that came out before SY 22-23 have the unit introduction slide with an SEL lesson (which may be ignored), followed by the academic topic introduction. Courses new in SY22-23 just have an academic introduction to the topic without an SEL lesson.</p>
Unit Conclusions	The unit concludes with unit review and test.	The unit concludes with an Apply activity, Review and Reflect, a sample work option, and generally a unit test.
Objectives	Objectives, which may be related to a textbook, are located on the Get Started slide. There may be more than one objective.	Learning objectives linked to learning standards are located before the Explain slide, and the student sees it as Objective. There is only one learning objective for each content bundle in the lesson.
Content Presentation	<p>The content is often presented like a textbook in one sequential lesson with an Activity page and Review at end.</p> <p>There are a variety of interactive methods, along with text, to present content. This varies greatly between courses. There may be animated people or animals used to present content.</p>	<p>The content is focused and tightly addresses a specific idea or concept using a repeatable pattern.</p> <p>In addition to peer model videos, there are other videos, audio components, and interactive components that vary by course.</p>

<b>Component</b>	<b>Legacy</b>	<b>Pearson Curriculum with DCIM</b>
Consistency of Presentation	The courses are somewhat unpredictable in terms of where items or links are placed. Courses have a wide range of different looks and feels.	Most courses look similar, following a standard approach.
Focus	Lessons may have more than one learning objective, use several callouts and asides, and multiple sub-topics.	Lessons are streamlined, more tightly addressing a specific idea or concept. There is only one learning objective per content bundle in the lesson.
Cognitive Load	Because more than one learning objective may be addressed, the content may include multiple topics based on the textbook presentation.	The lesson structure purposefully allows planned chunking of content with a focus on one learning objective.
Use of Visuals and Interactives	There are numerous visuals in these courses, much of it coming from textbooks and third-party sources.	Depending on the subject and grade, some lessons have a peer model video as part of the second content bundle.  There are other videos and graphics as well.
Approach to Textbooks	Print and eBook texts are part of most courses with lessons linking to required textbook reading.	The courses are not reliant on digital or other textbooks, which allows for ownership of material and flexibility to update as needed. The courses are generally not built around a textbook and do not require materials to be shipped to homes for middle and high school students. There are printable and other physical materials used in the lower grades.
Frequency of Checking for Understanding (check points)	A lesson generally has one Quick Check at the end. There may be exercises within the lesson that provide feedback for answers that the student inputs.	The model includes multiple opportunities for students to check for understanding where answers and feedback are provided as part of each content bundle (Explain,

Component	Legacy	Pearson Curriculum with DCIM
		<p>Check-In, Practice). Each lesson generally has two to three of these bundles.</p> <p>Additionally, there is a Quick Check at the end of each lesson and a “Check Answer” feature for courses in grades K–5.</p>
Frequency of Practice	Practice opportunities are part of the Activity page, often coming from the related textbook. Each lesson has one Activity. There can be multiple tasks within the lesson, and students can check their accuracy with provided materials within the text.	The model includes multiple opportunities for students to practice with feedback within each content bundle.
Review	There are review exercises before the unit test, some of which are tied to the textbook.	<p>The Review section prompts the student to self-assess their skills by listing the learning objectives from the unit. Review comes after an Apply lesson and Online Practice lesson.</p> <p>There is a Reflect section that follows the Review, which encourages the student to think about their learning (metacognition).</p> <p>The Reflect slide is followed by Study Tips that guide the student in strategies to try in order to make sure they know the unit material before taking the unit test.</p>
<b>Appearance and Other Attributes</b>		
Look and Feel Between Courses	The courses have three tabs across the top to indicate	Students can use their cursor to hover over the advancing

Component	Legacy	Pearson Curriculum with DCIM
	<p>which part of the lesson the student is in (For example- Ready, Learn, Do).</p> <p>Each course may look different, with inconsistency in how information is presented, but all have the branded look with the Course Outline and Course Tools buttons on the left side of the screen.</p> <p>There is a glossary in the Resources section.</p>	<p>arrows that indicate which part of the lesson is coming next or came before (Explain, Check-In, Practice).</p> <p>There is a consistent style and format throughout every course.</p> <p>Key words have definitions pop up when the mouse hovers over them. Key words follow the learning objective on a slide. There is no glossary.</p>
Use of Tools and Third-Party Assets	There are third-party assets such as videos, tools, tutorials, etc. included.	Use of third-party assets is avoided (although there are some) so Pearson owns all material and can update accordingly.
Course Tools	There are basic icons for Virtual Library, Lesson Resources (Resources section), Assessments, Lesson Objectives, Print, and Help. There is information in the Resources section found under Course Tools in the Backpack.	There is a Backpack under the Course Tools area, but many courses do not have resources within the Backpack.
<b>Assessment</b> <b>Note: Details for these items are provided in this Playbook</b>		
Quick Checks	yes	yes
Quizzes	yes	no
Unit Tests	yes	yes
Discussions	yes	yes
Portfolios	yes	yes
Sample Work (space for teachers to request uploaded work for review)	There are sample work assignments created and included in the lesson.	Teachers may develop and request an assignment outside of what is in the course and have students



Component	Legacy	Pearson Curriculum with DCIM
		upload to a drop box connected with Sample Work.
Grade Entry	Teachers can enter grades without having an assessment completed.	Teachers can enter grades after an assessment is completed.

Table 13. Contrasting Pearson legacy courses with Pearson curriculum courses using DCIM.

## Teacher Feedback for Students: The Upload Feature

The Pearson Curriculum now has an upload feature that is similar to what is found in legacy courses. Feedback files can be uploaded after manually grading a student's assessment questions. Students in Platform A will receive an autogenerated WebMail message when you add written feedback in the textbox or upload a feedback file. There are multiple acceptable file types, and you can upload up to 12 feedback files to send to students.

### Upload Feedback

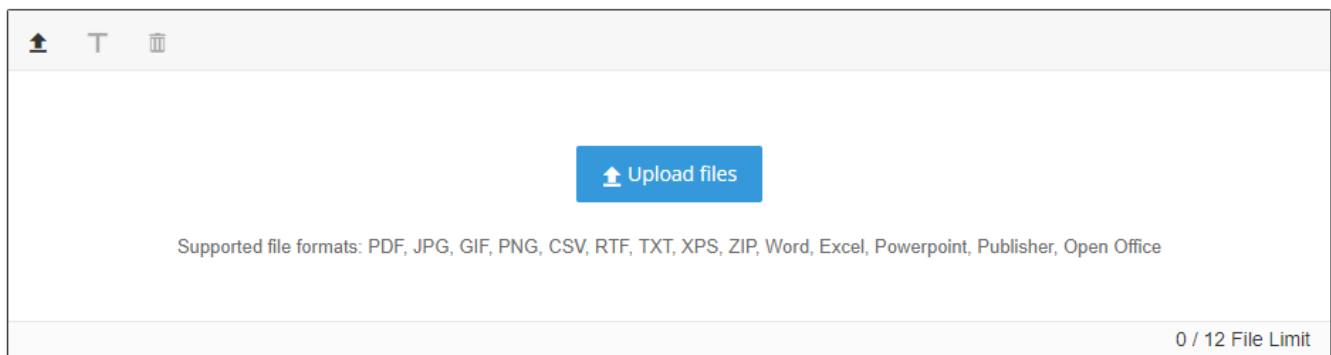


Figure 37. New feedback upload function that teachers may use for their students.

Note: Teachers may upload any of the following types of files: Word, PowerPoint, Open Office, jpg, png, csv, txt, zip, Excel, Publisher, gif, pdf, rtf, xps.

Students can access all their assessment feedback in the Grade Book through the **Teacher Feedback** icon (see image below) when a teacher has typed written feedback and/or provided them with feedback via file upload.

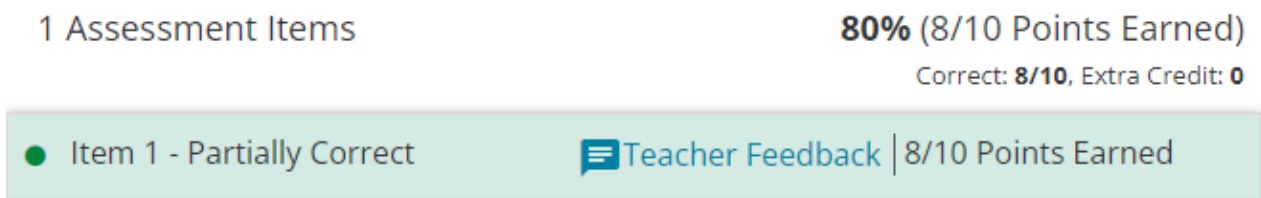


Figure 38. The Teacher Feedback link, where students can view teacher feedback for assessment items.

## Professional Development Discussion Topic for Unit 6

Cognitive load is one of the differences between the Pearson legacy courses and the DCIM courses. Become familiar with the concept and come to a professional discussion ready to talk about how the DCIM handles cognitive load and what ways you as the teacher might interface with the format.

## Unit 7: The Teacher's Role

There are attributes that are critical to the teacher's role as part of using the DCIM. The following table connects these aspects to elements of the DCIM and Pearson Curriculum approach. We will take a closer look at synchronous learning in Unit 8.

<b>Teacher Role Attribute</b>	<b>Connection to the DCIM and Pearson Curriculum</b>
The teacher encourages students to set goals, take risks, and see failures as learning opportunities.	This is part of a growth mindset, social and emotional learning (SEL), and 21st century skills.
The teacher designs learning experiences that allow students to reason, analyze, and express their ideas to build understanding, and to deepen and extend knowledge.	Supplementing the asynchronous content, new learning experiences could be in the form of synchronous lessons, a work sample, or a teacher-constructed portfolio.
The teacher makes appropriate modifications to curriculum and instruction based on state standards, state assessments, and student learning needs while remaining true to the rigor and objectives of the course.	While the Pearson Curriculum is aligned to state standards, some teachers choose to add more focus. The content bundles with Check-In and Practice, along with the Quick Checks, unit test, Apply lessons, and/or portfolios provide rich information for teachers to gauge where modifications are needed. The Learning Coach and student communication is a critical part of this effort.
The teacher uses synchronous LiveLesson sessions to provide targeted instruction, intervention, or	The Pearson Curriculum with the DCIM is brought to life during synchronous learning sessions that augment the asynchronous course. This is important for all students, but particularly for learners with special needs. Equally important are the embedded 21st century skills that require discourse and student

<b>Teacher Role Attribute</b>	<b>Connection to the DCIM and Pearson Curriculum</b>
extended learning opportunities to individuals or small groups of students based on performance data and common student needs.	collaboration. State standards that may require oral presentations.
The teacher helps students see the value and relevance of what they are learning and connect the content to their lives through real world examples and applications.	This action may be part of the lesson intro Spark that the teacher augments, apart from what is in the course.
The teacher is a reflective practitioner.	This aligns with the Reflect part of the DCIM phase. Students are asked to reflect; teachers need to as well.
The teacher guides students to become self-regulated learners, improve metacognitive awareness, and monitor their own progress by modelling and explicitly teaching to them.	This is indicative of supporting SEL and 21st century skills.
The teacher uses results from formative and summative assessments to inform instruction.	The content bundles with Check-In and Practice, along with the Quick Checks, unit test, Apply lessons, and/or portfolios provide rich information for teachers to gauge student progress and gauge where additional work is needed. Benchmark data is also a critical source of information to understand where students may have learning gaps as they start a new unit that includes Activate Prior Knowledge.

*Table 14. Teacher roles and the Pearson Curriculum with the DCIM.*

## Professional Development Discussion Topic for Unit 7

Consider all the potential areas in the DCIM that provide feedback to the student, Learning Coach, and teacher about learning progress or misconceptions. Prepare for a professional development discussion about formative assessment in the DCIM and how to get the needed snapshots of progress quickly enough to respond to individual or group learning needs.

# Unit 8: Application of the DCIM

## Synchronous Learning to Support Asynchronous Courses

Online learning takes place in two typical ways: asynchronously (individual student time online with the curriculum and without others outside of their Learning Coach), and synchronously (live sessions where students interact with teachers, other staff, and fellow students at the same time). Synchronous learning is used to facilitate and enrich learning beyond the lesson content while also addressing the wide range of student contact needs. Key recommendations for synchronous learning include the following:

- Data is needed to determine what should be targeted in a synchronous learning session.
- Targeted sessions address specific skills that students may be struggling with.
- Sessions can be for all students, may be used for test preparation, may help advance note-taking skills, and may also help with socialization.
- Sessions may follow a flipped learning model in which students are asked to complete an activity prior to attending a synchronous learning session, then everyone comes to the session with the same knowledge.
- Synchronous learning time may be used to enrich learning, provide reteaching if necessary, or provide intentional practice opportunities.
- Ensure opportunities for students to use the microphone, participate in polls and chat pods, or share work as appropriate.

As the teacher, watch your recorded sessions and reflect on wait time, check to see if your questions are mostly recall type, or if you divert from your intentions.

The synchronous learning sections that follow are specific to the DCIM model. The recommendations listed in the introduction to this topic can be generalized for the Pearson Curriculum.

### **Remediation**

One of the advantages of the DCIM is that each learning objective gives students a chance to do a Check-In and Practice. Some learning objectives are presented two to three times with different learning approaches, such as narrative, peer model, and 21st century skills. This means there are multiple opportunities to check on learning and practice the skills. For some students, however, it is not enough.

Students who regularly need more guided practice are good candidates for synchronous learning sessions. The teacher has several ways to collect data to know if the Practice parts of content bundles need expansion. Communication with the student and Learning Coach is key.

## Preemptive Strike

The DCIM has an Introduce phase that includes a Spark activity to pique students' interest and curiosity about a new topic at the beginning of a unit. This phase also includes an Activate Prior Knowledge feature, helping students remember skills they may have acquired to establish a connection with the new topic.

Some teachers choose to use a synchronous learning session as a preemptive strike and extra boost for the Spark and Activate Prior Knowledge activities. As teachers get to know their students better, they may want to personalize the welcome portion of the new unit (or lesson). It is important for teachers to review what students will be doing asynchronously because teachers may choose to provide more clarification of a topic or simplify instructions for students.

## Peer-to-Peer Learning

Synchronous learning is an essential approach to supporting peer-to-peer learning. As the Pearson Curriculum is aligned to state and national standards, there are some learning objectives linked to student interaction that are delivered synchronously. Standards may be oral presentation, collaborative group work, or engaging in certain types of discussions. The Pearson Curriculum may offer an activity that is close to a synchronous experience, but teachers who are aware of certain standards may choose to enhance the interaction between students so they may learn from each other.

Peer-to-peer learning is also integrated into the National Online Teaching Standards, which are part of the foundation for the Pearson Curriculum. Standards and substandards related to peer-to-peer learning are highlighted in the following examples:

<b>Standard</b>	<b>Sub Standard</b>	<b>Description</b>
A		The online teacher demonstrates professional responsibilities in keeping with the best practices of online instruction.
	5	The online teacher demonstrates knowledge of the role of online learning in preparing learners to participate as global citizens. The online teacher builds learner capacity for collaboration in the online environment and encourages learners to participate as global citizens. Learners are encouraged to participate in groups and complete assignments in a collaborative manner. Examples include peer-based learning, peer coaching, authentic learning experiences, small group work, collaborative learning, and guided design built into the course.
C		The online teacher facilitates interactions and collaboration to build a supportive online community that fosters active learning.

<b>Standard</b>	<b>Sub Standard</b>	<b>Description</b>
	1	<p>The online teacher employs learner-centered instructional strategies and current practices that leverage technology for learner collaboration.</p> <p>The online teacher may use any number of active learning strategies, including peer-based learning, inquiry-based activities, collaborative learning, discussion groups, and small group work to cultivate learner interaction.</p>
	3	<p>The online teacher develops a community among culturally diverse learners by providing opportunities for interaction that are conducive to active learning.</p> <p>An essential component of online teaching is creating a diverse community conducive to active learning, where learners can openly communicate and work to achieve a mutual objective.</p> <p>In addition, it is important that online learners feel a sense of inclusion, control, and care created by the teacher, which is accomplished through effective facilitation. Once community is established, active learning such as authentic assessment and peer-to-peer discovery can take place.</p>
	4	<p>The online teacher promotes learner-learner interaction in online groups to foster collaboration and promote higher-order thinking skills such as analysis, synthesis, and/or evaluation.</p> <p>Learner-learner interaction may take place in group activities, such as projects, discussions, and instruction. An important component to building higher-order thinking skills among learners is facilitating their interaction in online settings, particularly in groups, projects, and/or discussions to allow collaborative interaction.</p>

*Table 15. National Online Teaching Standards and peer-to-peer learning.*

## **Collaboration and 21st Century Skills**

The Framework for 21st Century Learning lists four learning and innovation skills that are important for students to develop to be prepared for increasingly complex life and work environments:

- creativity and innovation
- critical thinking and problem solving
- communication
- collaboration

While the Pearson Curriculum using the DCIM integrates 21st century skills as both a learning approach and a thread, teachers may enhance these skills by providing synchronous learning opportunities that facilitate skill development.

## Reinforcing SEL, DE&I, and Growth Mindset Threads

A common theme among the threads of social and emotional learning (SEL); diversity, equity, and inclusion (DE&I); and growth mindset is developing self-awareness and understanding of the world outside of oneself. The opportunity to have reciprocal conversations synchronously provides a space for, and reinforces, the skills that our students need to develop for their own success and for the betterment of society.

## Applying the DCIM to Subject Areas

The DCIM is a consistent approach that is applied across subject areas. Each Pearson Curriculum course with the DCIM follows the phases and generally follows the iterative content bundles of Explain, Check-In, and Practice with a narrative, peer model, or 21st century skills learning approach applied. There are, however, some differences between courses based on subject area or grade band. The most significant differences are found in the elementary ELA and middle school math courses.

This DCIM Playbook represents what is currently known in terms of Pearson Curriculum improvements and courses under development for the upcoming school year. We continue to modify and improve based on feedback. Please keep in mind, as you review the grade and subject areas relevant to your practice, that the Pearson Curriculum with the DCIM is under development, with many more courses yet to be built and courses to be modified based on teacher experiences with the new curriculum.

The following sections are based on what is known at the time of this DCIM Playbook release.

### ***English Language Arts (ELA), Engagement and Instructional Best Practice***

At this time, the Pearson Curriculum with the DCIM has been published for middle school language arts, ELA for grades 3–5, and ELA K–2. High school English is due to be published for the 2023-2024 school year.

### **Elementary ELA**

In Elementary Language Arts, skill areas such as genre, comprehension, speak/listen, fluency, and application, are grouped together under a theme into a unit with each component serving as one lesson, generally totaling 90 minutes. This deviates from other Pearson Curriculum courses where there is typically only one learning objective per lesson.

In the following example, the unit is called *Finding the Cure*. It is part of a *Feel Better!* Mega Unit with three other units.

<b>Lesson Component</b>	<b>Lesson Objectives</b>	<b>Lesson Days</b>
Finding the Cure: Genre	<ul style="list-style-type: none"> <li>• explain information from text</li> <li>• identify the correct order of adjectives in informational texts</li> <li>• identify words with <i>r</i>-controlled vowel sounds spelled are, air, ear</li> <li>• write lowercase <i>r</i> and <i>s</i> in cursive</li> </ul>	1
Finding the Cure: Comprehension	<ul style="list-style-type: none"> <li>• explain purpose, audience, and message in texts</li> <li>• correct the order of adjectives in sentences</li> <li>• write lowercase <i>y</i> and <i>z</i> in cursive</li> <li>• pronounce words spelled with <i>r</i>-controlled vowel sounds spelled are, air, ear</li> </ul>	1
Finding the Cure: Speak/Listen	<ul style="list-style-type: none"> <li>• explain visual information</li> <li>• speak using the correct order of adjectives</li> <li>• choose a book to read</li> </ul>	1
Finding the Cure: Fluency	<ul style="list-style-type: none"> <li>• explain visual information</li> <li>• explain information given in a visual way</li> <li>• spell words with <i>r</i>-controlled vowel sounds</li> <li>• discuss purpose, audience, and message in texts</li> </ul>	1
Finding the Cure: Fluency Discussion	<ul style="list-style-type: none"> <li>• discuss audience, purpose, and message</li> <li>• apply discussion</li> </ul>	1
Finding the Cure: Read	<ul style="list-style-type: none"> <li>• choose a book to read</li> </ul>	1
Feel Better: Unit Test		

*Table 16. Example of ELA lesson components, learning objectives, and lesson days.*

## Course Structure

Each course has 34 units: one course overview unit and 16 five-day mini-units per semester.

Mini-units are five days of an instructional sequence in a typical unit and six days of an instructional sequence in units containing a unit test on Day 6.

Mini-units are grouped together into fours to create mega-units. At the end of four mini-units (a mega-unit), students complete an Online Practice and unit test. These cumulative assessments will cover all standards from the previous four mini-units (one mega-unit) of instruction.



Semester A Mega-unit 1							Semester B Mega-unit 1							
Course Overview		Day 1					Course Overview		Day 1					
Mini-unit 2	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 2	Mini-unit 1	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 3	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 3	Mini-unit 2	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 4	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 4	Mini-unit 3	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 5	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test	Mini-unit 5	Mini-unit 4	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test

Semester A Mega-unit 2							Semester B Mega-unit 2							
Course Overview		Day 1					Course Overview		Day 1					
Mini-unit 6	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 6	Mini-unit 1	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 7	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 7	Mini-unit 2	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 8	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 8	Mini-unit 3	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 9	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test	Mini-unit 9	Mini-unit 4	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test

Semester A Mega-unit 3							Semester B Mega-unit 3							
Course Overview		Day 1					Course Overview		Day 1					
Mini-unit 10	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 10	Mini-unit 1	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 11	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 11	Mini-unit 2	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 12	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 12	Mini-unit 3	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 13	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test	Mini-unit 13	Mini-unit 4	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test

Semester A Mega-unit 4							Semester B Mega-unit 4							
Course Overview		Day 1					Course Overview		Day 1					
Mini-unit 14	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 14	Mini-unit 1	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 15	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 15	Mini-unit 2	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 16	Day 1	Day 2	Day 3	Day 4	Day 5		Mini-unit 16	Mini-unit 3	Day 1	Day 2	Day 3	Day 4	Day 5	
Mini-unit 17	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test	Mini-unit 17	Mini-unit 4	Day 1	Day 2	Day 3	Day 4	Day 5	Day 6-Unit Test

Figure 39. Elementary ELA course structure.

Mega-units may contain one performance-based assessment. These assessments will either be a formal discussion or a written composition portfolio, such as a research report, narrative story, how-to essay, or explanatory essay.

The following images are of a mini-unit from an ELA 4A course outline, the first for Platform A and the second for Platform B.

## Course Outline ✕

★ indicates lesson notes    📖 indicates lesson intro page

- 5. The Science of Sickness: Synthesize Quick Check
- 13. Finding the Cure
  - ▶ 1. Finding the Cure: Genre Quick Check
  - 2. Finding the Cure: Comprehension Quick Check
  - 3. Finding the Cure: Speak/Listen Quick Check
  - 4. Finding the Cure: Fluency
  - 5. Finding the Cure: Fluency Discussion Discussion
  - 6. Finding the Cure: Read Practice
  - 7. Feel Better! Unit Test Test Sample Work

Figure 40. Elementary ELA 4A mini-unit course outline unit example from Platform A.














	Finding the Cure
	Finding the Cure: Genre
	Finding the Cure: Genre Quick Check
	Finding the Cure: Comprehension
	Finding the Cure: Comprehension Quick Check
	Finding the Cure: Speak/Listen
	Finding the Cure: Speak/Listen Quick Check
	Finding the Cure: Fluency
	Finding the Cure: Read
	Feel Better! Online Practice
	Feel Better! Unit Test
	Feel Better! Unit Test
	Feel Better! Sample Work

Figure 41. Elementary ELA 4A mini-unit course outline unit example from Platform B.

## Elementary ELA Assessment

There are a few differences in the assessment approach for the elementary ELA courses when compared with the standard Pearson Curriculum with the DCIM. The following table highlights ELA assessment at this level:

<b>Skills Check (Only in Gr. 1-2)</b>	<ul style="list-style-type: none"> <li>• one in every mega-unit</li> <li>• around 10 items</li> <li>• auto-scored (with support from Learning Coach)</li> <li>• DOK 1 and 2</li> </ul>
<b>Quick Check</b>	<ul style="list-style-type: none"> <li>• one after every lesson</li> <li>• around four items</li> <li>• auto-scored</li> <li>• DOK 1 and 2</li> </ul>
<b>Online Practice</b>	<ul style="list-style-type: none"> <li>• one after every mega-unit</li> <li>• around 15-20 items</li> <li>• auto-scored</li> <li>• DOK 1 and 2</li> </ul>
<b>Unit Test</b>	<ul style="list-style-type: none"> <li>• one after every mega-unit</li> <li>• around 17-24 items</li> <li>• auto and human scored</li> <li>• maximum three human-scored items</li> <li>• DOK 1, 2, and 3</li> </ul>

Table 17. Elementary ELA assessments.

## **SKILLS CHECK**

In Grades 1–2, students will complete one Skills Check per mega-unit. There will be eight Skills Checks in Grade 1 and eight Skills Checks in Grade 2. Skills Checks will replace Quick Checks once per mega-unit and will be scored but not graded.

Items within Skills Checks assess reading skills and processes from the mega-unit that cannot easily be assessed in traditional items. Within Skills Checks, Learning Coaches will be observing their student's application skills and rating their proficiency. For instance, students can be asked to apply foundational reading skills such as reading a sentence with accuracy, fluency, or expression. Learning Coaches will then be asked to identify whether students read with expression (or not) through a multiple-choice selection. Spelling/phonics learning objectives from the mega-unit can also be assessed within Skills Checks. Students can be asked to read, write, or build words, and the Learning Coach would respond whether the student correctly read/wrote/built the word within the assessment.

## **DROP BOX ASSESSMENTS**

There are three assessment types that are submitted through drop boxes. They are drafts, portfolios, and sample work.

Draft and portfolio drop boxes are used in the course any time a draft or portfolio is submitted.

Sample work drop boxes are a little different. There is no specific activity meant to be submitted in each one. Teachers can use these at their discretion to have students submit any assignments that they want.

## **Texts**

There are three buckets of texts for ELA. They are decodable readers, leveled readers, and anchor texts. The anchor text is digital with audio narration and is on day one. Leveled readers are used on days 2–5. The texts all look the same and are tied to the same theme, but they are leveled. Assessment questions are applicable to all three levels. Decodable readers are integrated into the course as PDFs and bound/printed for students as well.

For spelling/phonics in Grades 1–2, each mini-unit will have a decodable text. Students have opportunities throughout the week to read the decodable text, identify examples of the spelling/phonics skills by circling or highlighting, add their examples of the skill by creating a new ending, and other activities. The decodables are a fun opportunity for students to play with words and form deep understandings of phonics skills.

## **Independent Reading**

Students are asked to select a book of their choosing to read. Each independent reading learning object bundle will have a focus based on the Reading/Language standards for that

grade to give the students a purpose for reading. Periodically, students may be asked to do something with their text in the form of a short book report, to be submitted as an Independent Reading Apply activity. For independent reading content bundles that are not Apply activities, there is no Check-In or Practice. In this case, the independent reading activity is not really a content bundle since no instruction is happening. The lesson will only contain an Explain.

## Written Comprehension (Portfolios)

In each grade, there are four written compositions. Each composition will follow the formal writing process.

- week 1 of the mega-unit: pre-writing
- week 2 of the mega-unit: drafting
- week 3 of the mega-unit: teacher is grading drafts (there will be no writing in week 3; students will have a typical unit without writing)
- week 4 of the mega-unit: revising, editing, and publishing (students will submit their portfolios in a drop box at the end of this week and may also present their portfolio)

Portfolios have a mentor exemplar. Writing learning object bundles throughout the mega-unit will reference the exemplar to apply specified writing standards. The mentor exemplar is created in consideration of the writing skills students will be taught in that mega-unit. The following is an example:

Narrative writing is one portfolio in Grade 2. The following are writing mini-lessons that appear in the narrative writing mega-unit (and also in the exemplar):

- Create a sequence of events.
- Expand a narrative by including some details to describe actions, thoughts, and feelings as well as appearance (physical features, expressions, clothing).
- Use temporal words to signal event order.
- Provide some sense of closure when writing a narrative.

Portfolios have rubrics. These rubrics are linked in the modules.

## Handwriting

For handwriting, students will watch a peer model video showing the letter being formed and complete a handwriting reproducible page. Each letter will have a worksheet that provides opportunities for students to identify, trace, and write the letter. In some content bundles, students will practice writing more than one letter, so there will be several peer model videos and handwriting reproducible pages referenced on the correlating handwriting slide.

## Discussions

In each grade, there are at least two formal discussions. Discussions occur in mega-units where there is no written composition portfolio.

Typically, students plan their discussion responses in one week and then revise and submit their discussion responses via a drop box in the following week.

Discussions are scored using a discussion rubric.

## Apply Lesson

Some mini units contain an Apply activity. These content bundles provide opportunities for students to demonstrate mastery of the indicated standard. An example of the Apply activity follows.

<b>Lesson</b>	<b>Domain</b>	<b>ELA Component</b>	<b>Learning Objective</b>
4	writing/language	core reading/comprehension /vocab	apply the think-aloud strategy to retell the beginning, middle, or end of a story

*Table 18. Example of elementary ELA Apply activity.*

## Middle School ELA

Middle school ELA is well aligned with the DCIM. Each lesson is generally made up of at least two learning object bundles of Explain, Check-In, and Practice using a narrative, peer model, or 21st century skills learning approach.

Each unit is focused on one area of ELA, based on the state and national standards. The work expectations are tightly coupled with the unit's topic. Learning is demonstrated using the Apply or portfolio format. In Apply, the student demonstration is given to the Learning Coach. Note that teachers may use the sample work lesson placed within each unit to design their own assignment for student upload. Additionally, while the ELA portfolios are in a unit, the novel studies are stand-alone units.

An example of learning demonstration, the Writing Explanatory Text Portfolio 1, 2, and 3 in Language Arts 8 has the following learning objectives for each lesson in the unit:

### Portfolio 1

- In this section, you will organize your ideas before writing.
- In this section, you will revise a paragraph for active voice.

### Portfolio 2

- In this section, you will write an informative essay with appropriate mood.
- In this section, you will revise an informative essay.

### Portfolio 3

- In this section, you will create a Works Cited list of online sources.
- In this section, you will evaluate how well you addressed your purpose and audience throughout your writing.

## High School ELA to be Developed

### Math, Engagement, and Instructional Best Practices

The middle school math courses generally do not utilize the peer model learning approach. However, the peer model instructional approach will still be represented with peer model videos placed within some narrative content bundles.

### 21st Century Content Bundles

There is one learning objective per unit as a 21st Century content bundle, as well as the 21st Century Skill that should be addressed in the content bundle.

### Incorporation of the Standards for Mathematical Practices

Common Core has identified eight Standards for Mathematical Practice.

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

These standards are met in two ways throughout the middle school math courses. Specific learning objectives have been identified that are conducive to the blending of a math practice standard into a content learning objective. There is also stand-alone mathematical practice in the Apply section of specified units.

### Math Middle School Learning Objective Assessment Items

Quantity	DOK	Type	Scoring	Assessment to be used on	Notes
5	1 or 2	Math formula, cloze math, or cloze math with image.	Auto-scored	Lesson Online Practice	If the learning objectives does not lend itself to numerical answers, other

Quantity	DOK	Type	Scoring	Assessment to be used on	Notes
					item types can be used.
5	1 or 2 (align to verb in learning goal)	Multiple Choice: Standard (unless verb is better measured through another type)	Auto-scored	Quick Check	items from the Lesson Online Practice and Quick Check should be very similar
2	1 or 2 (align to verb in learning goal)	Multiple Choice: Standard (unless verb is better measured through another type)	Auto-scored	Online Practice	
2	1 or 2 (align to verb in learning goal)	any auto-scored	Auto-scored	Unit Test	includes at least five math question generator questions per unit
0-1	3	Math Essay	Human-scored	Unit Test	essay response is used for learning objectives that contain a verb that can only be fully assessed through an essay response

Table 19. Types of math assessments for learning objectives.

## Lesson Online Practice

Each Quick Check assessment throughout the middle school math program is preceded by an assessment type called Lesson Online Practice (LOP). Like the unit-level online practice assessment, the LOP assessment category is unweighted and does not count toward students' grades. The purpose of each LOP is to give learners ample opportunity for practice while giving teachers the ability to monitor student practice attempts and effort.

## Math Question Generator Question Type

The math question generator question type is used to address academic integrity concerns. This question type allows the creation of expressions and equations with dynamic content. There is a minimum of five of these questions per unit test.

### Discussions

Discussion prompts have been created to provide real-world problems that students must work through and explain their reasoning and thought process. The prompts encourage real discussion and opportunities for students to share their opinions, rather than a right or wrong answer. The prompts should promote and encourage the use of mathematical practices (see the [Common Core Standards for Mathematical Practice](#)).

For Math 6-8, discussion assessments are placed directly after a lesson with a 21st century skills content bundle and are directly related to the journal prompt introduced in that content bundle.

### Portfolios

There are two approaches used in Math 6-8 for portfolios. One type has the portfolio embedded in a content bundle with instruction, and the other type has the portfolio that stands alone.

Portfolios with instructional content bundles are related to a learning objective that cannot be assessed using an auto-graded item type. It requires students to:

Draw (freehand, with ruler and protractor, and with technology) triangles given three measures of angles

Draw (freehand, with ruler and protractor, and with technology) triangles given three measures of sides"

The portfolios that stand alone contain no new content presented in the lesson. This portfolio type will address learning objectives related to using proportional relationships. All of the learning objectives listed have already been taught in previous lessons and assessed on Quick Checks, but this portfolio provides an opportunity to assess students at a deeper level. Regardless of the type of portfolio, the portfolio content bundle contains only content related to what a student must do to complete the portfolio assessment. The content describes the portfolio activity and any resources the student needs to complete the assessment.

## Status on High School Math Course Development

The Pearson Curriculum using the DCIM for high school math is scheduled to be published for the 2023-2024 school year.



## ***Science, Engagement, and Instructional Best Practices***

### **Elementary Science**

Elementary school science is well aligned with the DCIM. Each lesson is generally made up of at least two content bundles of Explain, Check-In, and Practice using a narrative, peer model, or 21st century skills learning approach.

Each unit is focused on a topic, based on the state and national standards. The work expectations are tightly coupled with the unit's topic. Learning is demonstrated using the Apply or portfolio format. In Apply, the student demonstration is given to the Learning Coach. Note that teachers may use the sample work lesson placed within the unit to design their own assignment for student upload.

Here is an example of a demonstration of learning via portfolio in a Science 4A for one unit.

#### Converting Energy Portfolio Day 1

In this section, you will list some ideas for devices that can change energy from one form to another.

#### Converting Energy Portfolio: Design

In this section, you will plan a device that can change energy from one form to another.

#### Converting Energy Portfolio: Create

In this section, you will build a device that changes energy from one form to another.

#### Converting Energy Portfolio: Test

In this section, you will test a device that changes energy from one form to another.

#### Converting Energy Portfolio: Improve

In this section, you will modify the device you made.

### **Middle School Science**

Middle school science is well aligned with the DCIM. Each lesson is generally made up of at least two content bundles of Explain, Check-In, and Practice using a narrative, peer model, or 21st century skills learning approach.

Each unit is focused on a topic, based on the state and national standards. The work expectations are tightly coupled with the unit's topic. Learning is demonstrated using the Apply or portfolio format. In Apply, the student demonstration is given to the Learning Coach. Note that teachers may use the sample work lesson placed within the unit to design their own assignment for student upload.

The following is a Science 7A Body Systems Portfolio 1, 2, and 3 unit example:

#### Portfolio 1

- In this section, you will describe all the major human body systems.
- In this section, you will compare the cardiovascular system of birds to humans.

#### Portfolio 2

- In this section, you will compare the skeletal system of humans and insects.
- In this section, you will compare the body systems of any type of organism to human body systems.
- In this section, you will research features of an organism's major body systems by identifying key search terms.

#### Portfolio 3

- In this section, you will contrast each major body system using research from multiple sources.
- In this section, you will design a presentation of research results.

## High School Science

High school science is well aligned with the DCIM. Each lesson is generally made up of at least two content bundles of Explain, Check-In, and Practice using a narrative, peer model, or 21st century skills learning approach.

Each unit is focused on a topic, based on the state and national standards. The work expectations are tightly coupled with the unit's topic. Learning is demonstrated using the Apply or portfolio format. In Apply, the student demonstration is given to the Learning Coach. Note that teachers may use the sample work lesson placed within the unit to design their own assignment for student upload. Additionally, while the high school science portfolios may be within a unit, they may also be a stand-alone unit.

The following is from a Biology A Homeostasis Portfolio 1, 2, and 3 unit example:

#### Portfolio 1

In this section, you will plan an investigation and identify evidence that will show how feedback mechanisms help an organism maintain homeostasis.

#### Portfolio 2

In this section, you will carry out an investigation that shows how feedback mechanisms help organisms maintain homeostasis.

#### Portfolio 3

Note: While no learning objective is in Portfolio 3, the student is asked to create a graph of data collected from investigation, look for patterns, and explain whether the resulting evidence supports or refutes their hypothesis.

## ***Social Studies, Engagement, and Instructional Best Practices***

### ***Elementary Social Studies***

Elementary school social studies is well aligned with the DCIM. Each lesson is generally made up of at least two content bundles of Explain, Check-In, and Practice using a narrative, peer model, or 21st century skills learning approach.

Each unit is focused on a topic, based on the state and national standards. The work expectations are tightly coupled with the unit's topic. Learning is demonstrated using the Apply or portfolio format. In Apply, the student demonstration is given to the Learning Coach. Note that teachers may use the sample work lesson placed within the unit to design their own assignment for student upload. The portfolio in the Social Studies 5A example that follows is its own unit, but portfolios are also placed within other units.

<b>American Research Report Portfolio</b>	American Research Portfolio Introduction Using Questions to Guide Research Choosing Sources Day 1 Choosing Sources Day 2 Making Sure Sources are Reliable Gathering Sources Evaluating Sources Answering the Compelling Question Putting it Together Finalizing American Research Report Portfolio	This unit is dedicated to walking the student through how to research and write a research paper, the culminating portfolio.
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*Table 20. Social Studies 5A example of unit portfolio tied to skill demonstration.*

## **Middle School Social Studies: To Be Developed**

### **High School Social Studies**

Social studies and English Language Arts (ELA) skills often go hand-in-hand, and there are states with standards that promote both student understanding of the social studies content as well as the literacy skills necessary to study history and the social sciences. When this is a requirement by state standards, there is a paring of a content learning objective with a skill or process learning objective for units and lessons. Teachers are advised to review the available benchmark literacy data for each student to be informed about individual student needs.

Text assets are used regularly through the content and assessments for social studies courses, with approximately two to three complete texts per unit. This is in addition to text excerpts,

which are used more frequently in both instruction and assessment. Full text assets are used not only for the content but for students to analyze in their entirety, to teach literacy through comprehension based on the unique structure of each text type.

The following types of text assets are used in the high school social studies courses:

- scholarly research paper
- magazine articles
- news articles

## World History

The overarching themes of world history include human-environment interaction, development and interactions of societies, conflict, and the expansion of belief systems and ideas that would transform societies. The themes as well as the big picture skills that should be applied in every unit are woven in an obvious manner throughout all units to inform instruction throughout the course.

Essential questions throughout instruction encompass both the course content and the social studies and literacy skills that students will learn and practice. Each content bundle has a learning objective that is reflected in an essential question that gives it purpose and meaning. The question is introduced at the beginning of the Explain slide and is incorporated throughout the content bundle.

The following is an example of a learning goal and essential question:

<b>Unit</b>	<b>Unit Level Essential Question</b>	<b>Human Origin Learning Standard</b>	<b>Content Bundle Essential Question</b>
Human Origins	How has the human experience been impacted by the environment?	Use timelines to assess the factors that led to the development of increasingly complex civilizations by showing the cause-and-effect relationship of certain events (Solve Problems).	What factors are needed for complex civilizations to develop?

*Table 21. Example of how essential questions are used at the unit and lesson level in World History.*

## Professional Development Discussion Topics for Unit 8

- Within the DCIM, students demonstrate their learning through Apply lessons, portfolios, discussions, and teacher-assigned sample work. With colleagues who teach in the same

grade band and subject, join a discussion prepared to highlight one to three of these learning opportunities found within the course or courses that you teach. Discuss your thoughts for how to best support these demonstrations of learning.

- Discuss the use of sample work. Be ready to provide an example, or to create an assignment with others that you would use in a unit as sample work. What criteria should there be related to the creation of meaningful sample work in your area?

## Unit 9: DCIM Courses Adapted to Specific Learning Needs

### Course Modifications in the DCIM

The Pearson Curriculum using the DCIM includes courses that are identified as Honors and Gifted & Talented. There are also versions of the courses that are called Connected, aimed toward students who need additional support.

#### **Gifted and Talented (GT), Honors**

Following the DCIM, each learning objective associated with a national standard generally contains two content bundles. These bundles will target the same learning objective but vary in learning approach to be either the peer model or 21st century skills approach. For Honors and GT differentiation, both content bundles are modified according to the strategy that follows. While peer model videos are not modified, the peer model associated content and activities are modified using additional text, images, or other media alongside the peer model video already developed for the on-level version of the learning object.

The following research-based strategies are used to develop the Honors and GT content. Note that some overlap naturally occurs between these methods of differentiation:

- modifying the product
- modifying the content
- modifying the process
- modifying the depth
- modifying the assessment

#### ***Modifying the Product***

While the Honors and GT courses share content with the standard level courses, at least 20% of the course content is differentiated for Honors and GT students. The learning objective and associated content bundles may be differentiated in the following ways:

- higher level DOK (extended and strategic thinking, including more opportunities for analyze, evaluate, apply)
- content treated with more variation or in-depth exploration
- additional complexity added on conceptual relationships
- learning objective emphasized for college-level course preparation

## ***Modifying the Content***

The following are ways that courses may be differentiated by instructional content:

- Open-ended questions are posed, and students are encouraged/directed toward independent study.
- Students may investigate a specific person, event, recent discovery, or place to gain a deeper understanding of the concept/skill being targeted.
- Students may draw their own conclusions from instruction, rather than having conclusions provided for them.
- The reading level is adjusted and key words and definitions that Honors or GT students are likely familiar with are removed.

## ***Modifying the Process***

The following are ways that courses may be differentiated by the process:

- Curiosity is encouraged, and students are given many opportunities to make observations, identify patterns, generalize and explain their conjectures, and argue for or against a hypothesis. Students are directed to frequently pose their own questions and posit possible answers.
- Application of concepts is emphasized by giving students opportunities to think through the problem-solving process. Students research and take notes throughout a content bundle to solve a problem.
- Application may be expanded via multidisciplinary concepts or practices.
- Portfolio activities may be modified to require students to determine their own methods of demonstrating knowledge. Activities may be enhanced to deepen the students' knowledge of the targeted concept and allow multiple paths to obtain the desired skill. Students may be provided with options for submission requirements.

## ***Modifying the Depth***

The following are ways that courses may be differentiated by depth:

- More abstract and complex thinking is promoted. Students are guided toward expertise through targeted, in-depth exploration.
- Research questions are created for self-guided inquiry.
- Multidisciplinary concepts and themes are explored rather than having students observe connections pointed out in the instruction.
- More real-world problem solving is explored.

## ***Modifying the Assessment***

The following are ways that courses may be differentiated by assessment:

- Some of the assessment items associated with differentiated learning objectives are modified to reflect the increased rigor of the instructional content. This does not necessarily mean that items are converted to teacher-graded item types. Differentiated items assess increased content rigor by aiming for higher levels of cognition, not through convoluted questioning or excessive detail.
- Students create their own assessment items as a review activity/study strategy in the practice activities. Students are encouraged to ensure that all answer options are plausible. Students may create short answer or essay items as well.
- Breadth of collaboration in discussions is enhanced. For example, students may be directed to come up with their own discussion questions for an initial post as part of starting a social media conversation.

## **Connected Version**

The Connected version of courses exists for special populations such as students with special education IEPs, English learners, and students with 504 plans. Based on feedback from teachers and families, the content in the Connected version is presented only using the narrative learning approach. Connected courses do not use the peer model or 21st century skills learning approach in the learning object bundles.

Special populations of students may be assigned a Connected course representing a range of grade levels different than their own.

## ***Modifying DCIM Components for Special Needs***

At this time, the Pearson Curriculum courses using the DCIM are not modified within a grade level for students with special learning needs. The content bundle that cycles with Explain, Check-In, and Practice is offered in the same manner for all students taking a particular course. Each bundle will use either a narrative, peer model, or 21st century skills learning approach, unless the course is a Connected version, which uses only the narrative approach.

There are, however, several ways that teachers adjust the courses to meet the needs of special populations of students. Examples of these modifications follow:

- adding teacher-made video with simplified instructions to introduce assignments or portfolios
- adding teacher-made videos to augment the Spark or as part of the Activate Prior Knowledge in the Introduce phase
- dropping lessons that do not meet the state essential standard list
- providing extra practice items
- creating alternative assessments or modifications to Quick Checks and unit tests

- providing templates to use in completing modified assessments
- modifying or substituting the existing portfolio for a different one
- adding multiple bonus/extra-credit opportunities

### ***How Might a Portfolio Be Changed?***

Portfolios can be modified to be more engaging or tightly organized using the same skills being assessed by the original portfolio. For example, instead of a compare/contrast essay, students may be assigned the task of making a poster or PowerPoint comparing characters or other literary elements of their choice. Students could be asked to write a supporting paragraph or an introduction or conclusion versus a complete essay.

The following example is from Language Arts 6B in the Pearson Curriculum. It is about comparing texts between “Amy’s Metaphor” by Elisa Oh and “From Scratch” by Susie Castellano. The images below show what the student sees in the course. It is followed by an example of a teacher’s adaptation of the assignment, which provides structure for students who need extra guidance.

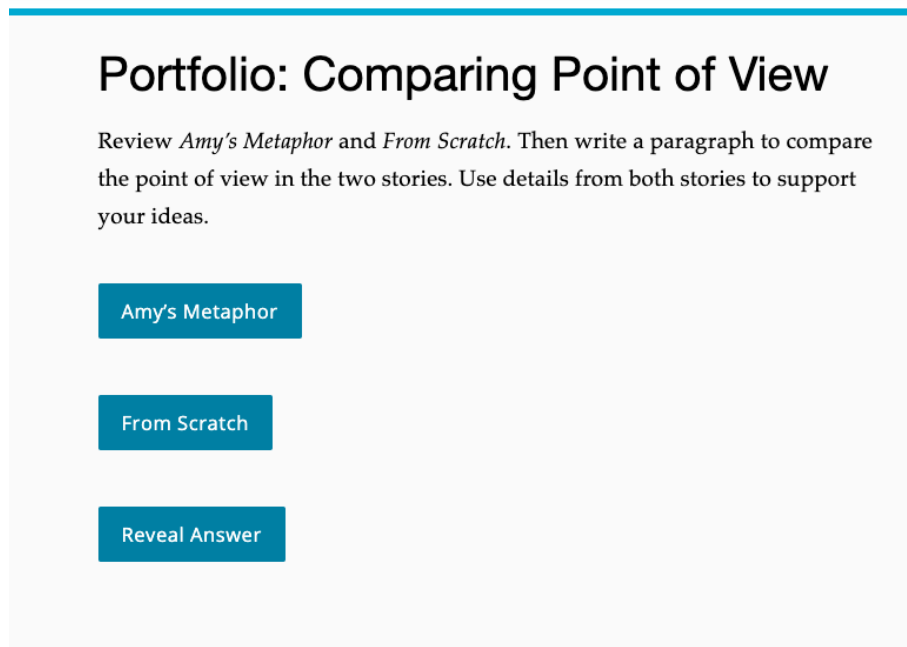
The image shows a digital interface for a portfolio assignment. At the top, the title "Portfolio: Comparing Point of View" is displayed in a large, bold, black font. Below the title, a paragraph of text reads: "Review *Amy's Metaphor* and *From Scratch*. Then write a paragraph to compare the point of view in the two stories. Use details from both stories to support your ideas." Underneath this text, there are three blue rectangular buttons with white text, arranged vertically. The buttons are labeled "Amy's Metaphor", "From Scratch", and "Reveal Answer".

Figure 42. LA 6B Comparing Point of View Portfolio using Amy’s Metaphor and From Scratch.



## Write Comparative Paragraphs

Write three paragraphs that compare *From Scratch* and *Amy's Metaphor*.

1. Write a paragraph that summarizes the stories and describes the similarities and differences in the plot structures of the stories.
2. Write a paragraph that compares the point of view and main characters of the stories.
3. Write a paragraph that explains which story you liked more based on the comparisons you made in this portfolio of the stories' style, tone, plot structure, character development, or point of view.

Use details from the stories to support your ideas in each paragraph.

Amy's Metaphor

From Scratch

Figure 43. LA 6B Writing Comparative Paragraphs Portfolio using "Amy's Metaphor" and "From Scratch."

## Teacher Modification Example of Comparing Texts Portfolio

### Comparing Texts Portfolio

Directions: Complete the graphic organizer below and then submit it to the drop box. Don't forget to run spell check!

Be sure that:

- Every idea is presented in a logical order.
- Every sentence begins with a capital letter and contains end punctuation.
- Every sentence is complete, with no run-on sentences.
- You have followed rules for capitalization. All your proper nouns are capitalized.
- You use a comma after all your transitions and transitional phrases or clauses.

<b>Story Title:</b>	"Amy's Metaphor" by Elisa Oh	"From Scratch" by Susie Castellano
<b>Paragraph Summary</b> <b>5-7 sentences each</b> <b>*both boxes should be completed</b>		
<b>Similarities and Differences in the PLOT</b> <b>*all boxes should be completed</b>		
	Both Stories:	
<b>Similarities and Differences in the POINT OF VIEW</b> <b>*all boxes should be completed</b>		

Figure 44. Teacher-made graphic organizer for Comparing Texts Portfolio.

Another way teachers have modified portfolios is by creating a list of options from which the students can choose an assignment of interest.

### ***Final Words on Modifying Pearson Curriculum Courses with the DCIM***

When it comes to modifying coursework, there are two key principles to consider beyond what will be most helpful to the student. First, all modifications or exchanges should clearly map back to the learning objective. Secondly, a modification gives you the chance to adjust for reading level and vocabulary issues. Use an online tool to check the reading level for what you write on your own to be sure you are within the desired range.

## Professional Development Discussion Topics for Unit 9

- Select a portfolio that you know some of your students may struggle with. Create a replacement or modified portfolio with a particular special needs student in mind. Come to the professional discussion prepared to share, receive feedback, and provide feedback to your colleagues on their presentations.
- How can teachers in your school collaborate and capture customization work?