Suggested Learning Activities for Grade 7 students during the COVID-19 school closure.

Seattle Public Schools is committed to making its online information accessible and usable to all people, regardless of ability or technology. Meeting web accessibility guidelines and standards is an ongoing process that we are consistently working to improve.

While Seattle Public Schools endeavors to only post documents optimized for accessibility, due to the nature and complexity of some documents, an accessible version of the document may not be available. In these limited circumstances, the District will provide equally effective alternate access.

Due to the COVID-19 closure, teachers were asked to provide packets of home activities. This is not intended to take the place of regular classroom instruction but will help supplement student learning and provide opportunities for student learning while they are absent from school. Assignments are not required or graded. Because of the unprecedented nature of this health crisis and the District’s swift closure, some home activities may not be accessible.

If you have difficulty accessing the material or have any questions, please contact your student’s teacher.
### Week of May 25 – 29
Grade Level: 7th Grade

#### 7th Broadcast Schedule
| Jadwalka Warbaahinta | Programa de Transmisión | Lịch Trình Phát Sóng |

<table>
<thead>
<tr>
<th>Tuesday, May 26th</th>
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<th>Friday, May 29th</th>
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- **SPS-TV Channels in the City of Seattle**: Comcast 26 and 319, Wave 26 and 695, Century Link 8008 and 8508.
- **Mawjadaha aad ka heli karto telefishanka dugsiyada dadwaynaha Seattle waa**: Comcast 26 iyo 319, Wave 26 iyo 695, Century Link 8008 iyo 8508.
- **Los canales SPS-TV en la ciudad de Seattle son**: Comcast 26 y 319, Wave 26 y 695, Century Link 8008 y 8508.
- **SPS-TV Channels trong thành phố Seattle**: Comcast 26 và 319, Wave 26 và 695, Century Link 8008 và 8508.
Matter and Energy in Ecosystems

Name _______________________________________________________

School _______________________________________________________

Class Period __________________________________________________

Teacher _______________________________________________________

Matter & Energy in Ecosystems, Lessons 6 & 7 Student Packet, SPS Science, 4-2020
Hello Families,

We hope you and your family are well and safe during this time. During this unprecedented out-of-school time, the SPS middle school science team will be offering instructional opportunities for students that align with the district’s adopted middle school science instructional materials.

This investigation packet is part of a series of district-aligned lessons for middle school science developed by AmplifyScience and adopted by SPS in 2019. While Amplify Science lessons are designed to be done in the classroom with peers, there are some activities that students can complete at home.

In this packet you will find activities to accompany the lesson videos being aired this week through Seattle’s Public television programming on SPS TV (local channel 26). The videos and packets are also posted to the, SPS Science webpage under their corresponding grade level. These lesson videos, developed in collaboration between SPS teachers, Denver Public Schools teachers, and Amplify Science, feature teachers going through the information in the lessons. The work in this packet is intended to be completed alongside the viewing of the video of the corresponding videos.

Closed captioning for the videos is available many home languages if this helpful to your family.

- Click CC (bottom right of video)
- Click Setting (the gear next to CC)
- Click Subtitles/CC
- Click Auto-translate
- Choose your language

For students who have access to the internet and the following devices and browsers may wish to log-in to their AmplifyScience account from home are welcome to do so. Chrome and Safari are the recommended browsers to use for full functionality of the Amplify digital tools and features.

Sincerely,
Seattle Public Schools Science Department
Matter & Energy in Ecosystems, Lessons 6 & 7 Student Packet, SPS Science, 4-2020
Los estudiantes que tienen acceso a Internet y a los siguientes dispositivos y navegadores pueden iniciar sesión en su cuenta AmplifyScience desde casa.

- Computadoras de Escritorio y Laptops (Chrome y Safari)
- Chromebooks
- iPads con iOS11.3+ (iPad5+) – Navegador sugerido: Safari

Sinceramente,
Departamento de Ciencias de las Escuelas Públicas de Seattle

En VIETNAMESE
Qoysaska Dugsiga Dhexe SPS.

Waxaad halkan ka heli kartaa sawiyo qaarko oo ay tahay mid ku caawineysa qoyskaada.

- guji CC (bottom right of video)
- guji Setting (the gear next to CC)
- guji Subtitles/CC
- guji Auto-translate
- Dooro luqadada

Ardayga heysta Khadka internet raacana tilmaanta isticmaalka ka dibna ay galaan koontadooda AmplifyScience guriga.

- Desktops and Laptops (Chrome & Safari)
- Chromebooks
- iPads that support iOS11.3+ (iPad5+) – talo isticmaal: Safari

Mahadsanid,
Dugsiga Dadvweynaha Seattle Waaxda Sayniska

Chúng tôi hy vọng quý vị và gia đình đều được khỏe mạnh và an toàn trong thời gian này. Trong thời gian nghỉ học chưa từng xảy ra này, nhóm khoa học của các trường cấp 2 SPS sẽ mang đến cho các em học sinh cơ hội học tập phù hợp với tài liệu giảng dạy khoa học dành cho cấp 2.

Tập bài học kiếm nghiệm này là một phần của một loạt các bài học được tạo và được phát triển bởi AmplifyScience. Trong khi các bài học Khoa học Amplify được thiết kế để thực hiện trong lớp học với các bạn học, nhưng cũng có một số hoạt động mà học sinh có thể hoàn thành tại nhà. Trong tập bài học này, quý vị sẽ tìm thấy các hoạt động để kèm với video bài học được phát sóng trong tuần này thông qua chuong trình truyền hình công cộng Seattle trên SPS TV (kênh đài phuong 26).


Phư để cho các video có sẵn qua nhiều ngôn ngữ nên điều này giúp ích cho gia đình của quý vị.

- Nhận CC (đưới cùng bên phải của video)
- Nhận vào Setting (biểu tượng hình bánh răng bên cạnh CC)
- Nhận vào Subtitles/CC
- Nhận vào Auto-translate
- Chọn ngôn ngữ của quý vị

Học sinh nào truy cập vào internet và các thiết bị và trình duyệt sau có thể đăng nhập vào tài khoản AmplifyScience của các em từ nhà.

- Desktops and Laptops (Chrome & Safari)
- Chromebooks
- iPads that support iOS11.3+ (iPad5+) – Suggested browser: Safari

Trân trọng,
Seattle Public Schools Science Department

Matter & Energy in Ecosystems, Lessons 6 & 7 Student Packet, SPS Science, 4-2020
Matter and Energy Lesson 6 (Amplify 2.1)

At the end of the last lesson, you learned there was not enough carbon dioxide in the biodome’s air, which led to a decrease in energy storage molecules inside the biodome.

What are some ideas you have about what might have caused the decrease in carbon dioxide? **Record some initial claims. You will have an opportunity to revise them after you learn more.**

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Show your ideas about which parts of an ecosystem give off carbon dioxide and which parts do not, sort the organisms into the categories you think they fit with:

- Soil Bacteria: decomposer
- Fallen Leaves: dead matter
- Elodea Plant: producer
- Mushroom: decomposer
- Snake: secondary consumer

<table>
<thead>
<tr>
<th>Gives off carbon dioxide</th>
<th>Does not give off carbon dioxide</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Snail and Elodea Experiment:

**Investigation Question:** Where does the carbon dioxide in abiotic matter come from?

Do producers give off or take in carbon dioxide? What about consumers? Can producers and consumers do both?

Gather evidence by watching the video of an experiment with a snail and some Elodea.

1. Record your predictions for which organisms will give off carbon dioxide in the table below.

2. Observe the color of the BTB solution in the video to figure out which organisms give off carbon dioxide.
4. Record the results in the table below.

**BTB Solution Experiment Key:**
The color of BTB changes depending on how much carbon dioxide is added:
- blue = no carbon dioxide
- green = low carbon dioxide
- yellow = high carbon dioxide

**Data:**

<table>
<thead>
<tr>
<th></th>
<th>Prediction: Will the organism give off carbon dioxide during the experiment? (yes or no)</th>
<th>Results: Did the organism give off carbon dioxide during the experiment? (yes or no)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snail (dark)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elodea plant (dark)</td>
<td></td>
<td></td>
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</tbody>
</table>

Do producers give off or take in carbon dioxide? Use evidence from the investigation:

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

Do consumers give off or take in carbon dioxide? Use evidence from the investigation:

_____________________________________________________________________________
_____________________________________________________________________________
_____________________________________________________________________________

**Part 1: Reading A Feast for Decomposers**

At the start of the lesson, you used the Sorting Tool to make predictions about which parts of an ecosystem give off carbon dioxide. In the video, you got evidence about whether producers and consumers give off carbon dioxide. Now, you will learn more about a third type of organism in ecosystems—decomposers.

Read the introduction of the article, A Feast for Decomposers, below and highlight any information that helps you determine whether decomposers give off carbon dioxide.
Active Reading Guidelines:

- Do a pre-scan of the text: *Are there any repeated words that you haven’t seen before?*
- Highlight unit science words
- Underline sections that provide us with evidence to help us understand our investigative question
  - Investigation Question: Where does the carbon dioxide in abiotic matter come from?
- Circle new ideas or things you do not understand and annotate with questions and comments

**A Feast for Decomposers**

**Chapter 1: Introduction**

Imagine you’re invited to a feast. When you get there, your host serves you droppings, dry brown leaves, bare bones, feathers, and a fallen tree. But you can’t eat that! This is a feast for decomposers, not for humans. Decomposers are fungi, bacteria, worms, and other small organisms that specialize in breaking down dead matter.

Decomposers can break down things that nothing else can. Bones, droppings, and other dead matter may not seem like food, but they contain materials that decomposers can use for energy and growth. For example, dead matter contains energy storage molecules that many decomposers use for cellular
Cellular Respiration

In cell parts called the mitochondria, glucose (an energy storage molecule) plus oxygen combine to make carbon dioxide plus water, releasing energy. This process is called cellular respiration.

respiration. Cellular respiration is a process that many organisms, including humans, use to release energy in order to survive. During cellular respiration, oxygen and energy storage molecules combine, releasing energy and giving off carbon dioxide. Energy storage molecules contain carbon, an important component of living things. Through cellular respiration, decomposers are able to release carbon found in dead matter, making it available to the ecosystem. Without decomposers, this carbon would stay trapped in the dead matter. Decomposers don’t just release carbon from dead matter, they also make other materials available to an ecosystem, such as nitrogen. Nitrogen is a critical nutrient for plant growth. Decomposers may be small, but they play an important role in any ecosystem. To learn more about decomposers, read one or more of the chapters that follow.
After reading the article and collecting evidence in the *Elodea* and snail video, choose which parts of the ecosystem that you think give off carbon dioxide to the air:

- decomposers
- producers
- consumers
- dead matter
- abiotic matter

Was your thinking the same or different than your ideas in the sorting tool on the first page?
The same
Different

New Science Words:
- **decomposer**: an organism that gets energy storage molecules (such as glucose) by breaking down dead matter
By now, you’ve seen that organisms like Elodea plants (producers), snails (consumers), and decomposers all give off carbon dioxide, **but how does this happen?** Today, you’ll use the Sim to look inside a single cell as you search for clues about how living things give off carbon dioxide.

Student ecologists keep investigating! With each step, the Biodome Investigation Team gets closer to finding out why the amount of carbon dioxide in the biodome decreased.

**Entry:**

In cell parts called the **mitochondria**, glucose (an energy storage molecule) plus oxygen combine to make carbon dioxide plus water, releasing energy. This process is called **cellular respiration**.

What is something you notice about cellular respiration from the diagram above?

__________________________________________________________________

__________________________________________________________________

In cell parts called the **mitochondria**, glucose (an energy storage molecule) plus oxygen combine to make carbon dioxide plus water, releasing energy. This process is called **cellular respiration**.

What is something you notice about cellular respiration from the diagram above?
We will now use a digital model to zoom in on a mitochondrion so we can see what happens in more detail.

**Investigation Question:** How do organisms give off carbon dioxide?

1. Press VIEW CELL for all the different organisms.
2. Compare what you see in the Sim to the diagram from the article we observed in the entry

<table>
<thead>
<tr>
<th>Similarities between Sim and diagram</th>
<th>Difference between Sim and diagram</th>
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Now that you have gathered evidence in the Sim, revise or add to your summary of cellular respiration:

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

**Does cellular respiration require energy from the sun?**

1. Open the Sim.
2. Click PLAY to run the Sim with the default settings.
3. Observe the Sim. Which parts of an ecosystem perform cellular respiration?
4. **Turn off sunlight in the ecosystem.** Observe whether the amount of sunlight affects which parts of an ecosystem perform cellular respiration.

Which parts of the ecosystem perform cellular respiration?

- [ ] Producers
- [ ] Primary consumer
- [ ] Secondary consumers
- [ ] Decomposers
Does the amount of sunlight affect which parts of an ecosystem perform cellular respiration?

☐ Yes  ☐ No

Diagram where carbon dioxide found in the air comes from:

Make sure to make a key to explain your diagram.
Write a caption that explains your diagram:

- abiotic matter
- biotic matter
- carbon
- carbon dioxide
- cellular respiration
- consumer
- decomposer
- ecosystem
- energy storage molecule
- producer
New Science Word(s)

**cellular respiration:** the chemical reaction between oxygen and glucose that releases energy into cells
Middle School Math
Grade 7
Topic 8
Lesson 8-9

Solve Problems Involving Geometry
How to Access & Use Pearson Bounce Pages

The Bounce Page app is a place where you can access Virtual Nerd videos. These are interactive tutorial videos that go over the fundamental math concepts of each lesson.

You can download Pearson Bounce Pages from your Android or Apple store.

TIPS FOR USING BOUNCE PAGE

1. AIM the camera so the FULL page is easily viewable on your screen. For best results, flatten the page, or if scanning a screen be sure the entire page is visible on your phone screen.

2. TAP the screen to scan the entire front of the page. Scan the ENTIRE page. Scanning a single problem will not work. Scan the page BEFORE students write on the page.

3. BOUNCE the page to life by clicking your Bounce Pages program icon.

4. Update the operating system on your device and the Bounce Pages app as needed.
Raylene packs a specialty cake in the box shown. What is the volume of the box?

**Step 1** Find \( B \), the area of the base.
The base is a triangle.

\[
B = \frac{1}{2}bh \\
= \frac{1}{2}(4)(5) \\
= 10
\]

The area of the base is 10 square inches.

**Step 2** Find the volume.

\[
V = Bh \\
= 10(15) \\
= 150
\]

The volume of the box is 150 cubic inches.

Paula made a window box shaped like a prism. What is the volume of the window box?

1. What shape is the base of the prism?

2. Complete the formula for the area of the shape identified in Exercise 1.

\[
A = \frac{1}{2}(b_1 + b_2)
\]

3. Substitute given measurements into the formula to find the area of the base.

\[
B = \frac{1}{2}(12 + 36) \\
= \frac{1}{2}(48) \\
= 24
\]

4. What is the volume of the window box?

\[
V = Bh \\
= 24(15) \\
= 360
\]

5. A playground has a tunnel in the shape of a triangular prism. What is the volume of the tunnel?

\[
V = \frac{1}{2}bh \\
= \frac{1}{2}(3)(4) \\
= 6 \text{ cubic inches}
\]
1. Find the volume of the cube shown at the right.

2. Find the volume of the triangular prism shown.

3. Find the volume of the hexagonal prism shown at the right. 
   Round to the nearest hundredth.

4. The walls of an empty grain silo form a hexagonal prism as shown at the right. Can the farmer store 4,250 cubic feet of grain inside the silo? Explain.

5. A rain gutter attached to the edge of a roof has the shape of a rectangular prism. It is 18 feet long and 7 inches high. It has a volume of 7,560 cubic inches. How wide is the gutter?

6. Make Sense and Persevere  A baker makes a layered cake with two layers that are rectangular prisms. Each layer is 2 inches tall. What is the volume of the cake? MP.1
7. The triangular prism shown at the right has two bases that are equilateral triangles. The perimeter of each base measures 63 cm. What is the volume of the prism?

8. Make Sense and Persevere Morgan made the display block shown. What is the volume of the block? Explain your answer. [MP.1]

9. Higher Order Thinking A steel tube is constructed in the shape of a regular hexagonal prism with a smaller regular hexagonal prism removed. The material used for the tube weighs 4 grams per cubic centimeter. How much does the tube weigh? Explain your reasoning.

10. What is the volume of the triangular prism shown at the right? Explain your answer.

11. Before adding flowers, James fills the vase shown $\frac{1}{3}$ full with water. How much water does it take to fill the vase $\frac{1}{3}$ full? Explain your answer.
Raylene packs a specialty cake in the box shown. What is the volume of the box?

Step 1 Find $B$, the area of the base.
The base is a triangle.
$B = \frac{1}{2}bh$
Formula for area of a triangle
$= \frac{1}{2}(6)(4)$
Substitute $b = 4$ and $h = 5$.
$= 10$
Simplify.
The area of the base is 10 square inches.

Step 2 Find the volume.
$V = Bh$ Formula for volume of a prism
$= 10(15)$
Substitute $B = 10$ and $h = 15$.
$= 150$
Simplify.
The volume of the box is 150 cubic inches.

Paula made a window box shaped like a prism. What is the volume of the window box?

1. What shape is the base of the prism?
   **Trapezoid**

2. Complete the formula for the area of the shape identified in Exercise 1.

   $A = \frac{1}{2}(b_1 + b_2)h$

3. Substitute given measurements into the formula to find the area of the base.

   $B = \frac{1}{2}(12 + 8)(6)$
   $= \frac{1}{2}(20)(6)$
   $= 60$

4. What is the volume of the window box?

   $V = Bh$
   $= 60(36)$
   $= 2,160$ cubic inches

**On the Back!** 66 cubic feet

5. A playground has a tunnel in the shape of a triangular prism. What is the volume of the tunnel?

   $V = \frac{1}{2}bh$ $h$
   $= \frac{1}{2}(4)(11)$ $3$
   $= 22$ cubic feet

6. Make Sense and Persevere A baker makes a layered cake with two layers that are rectangular prisms. Each layer is 2 inches tall. What is the volume of the cake?

   $V = lwh$
   $= 9(2)(3)$
   $= 54$ cubic inches

7. The triangular prism shown at the right has two bases that are equilateral triangles. The perimeter of each base measures 63 cm. What is the volume of the prism?

   $V = \frac{1}{2}bh$ $h$
   $= \frac{1}{2}(63)(18.2)$
   $= 537.3$ cubic centimeters

8. Make Sense and Persevere: Morgan made the display block shown. What is the volume of the block?

   $V = lwh$
   $= 4(4)(3)$
   $= 48$ cubic inches

9. Higher Order Thinking: A steel tube is constructed in the shape of a regular hexagonal prism with a smaller regular hexagonal prism removed. The material used for the tube weighs 4 grams per cubic centimeter. How much does the tube weigh? Estimate your reasoning.

   $V = \frac{1}{2}bh$ $h$
   $= \frac{1}{2}(4)(3.5)$
   $= 7$ cubic centimeters

   1,440 grams per cubic centimeter 
   $= 7$ grams
   $= 9$ grams

10. What is the volume of the triangular prism shown at the right?

    Explain your answer.

    $V = \frac{1}{2}bh$ $h$
    $= \frac{1}{2}(15)(10)$
    $= 75$ cubic meters

11. Before adding flowers, James fills the vase shown $\frac{1}{2}$ full with water. How much water does it take to fill the vase $\frac{1}{2}$ full? Explain your answer.

    $V = \frac{1}{2}bh$ $h$
    $= \frac{1}{2}(5.5)(11)$
    $= 30.25$ cubic inches

   1,821.6 cubic inches per cubic meter 
   $= 1,821.6$ cubic inches
   $= 1,821.6$ cubic meters

   $V = \frac{1}{2}bh$ $h$
   $= \frac{1}{2}(5.5)(11)$
   $= 30.25$ cubic inches
Middle School
Math Grade 7
Topic 7
Lesson 7-1
Probability
A box contains 8 equal-sized tiles labeled A, A, A, A, B, B, C and D. Jonah will randomly select one tile from the box. What is the probability that Jonah will select a tile labeled with the letter B? Describe this probability as impossible, unlikely, neither likely nor unlikely, likely, or certain.

There are 8 tiles. Two of the tiles have the letter B. The probability is 2 out of 8; \( \frac{2}{8} = \frac{1}{4} \). It is unlikely that Jonah will select a tile labeled with the letter B.

A bag contains 5 green marbles and 2 purple marbles. Keisha will randomly select one marble from the bag. What is the probability that Keisha will select a green marble? Describe this probability as impossible, unlikely, neither likely nor unlikely, likely, or certain.

1. How many marbles are in the bag?

2. The probability that Keisha will select a green marble is \( \Box \) out of \( \Box \).

3. What is the probability that Keisha will select a green marble?

4. It is \( \Box \) that Keisha will select a green marble.

On the Back!

5. A bag contains 10 black tiles and 10 white tiles. Caden will randomly select one tile from the bag. What is the probability that Caden will select a black tile? Describe this probability as impossible, unlikely, neither likely nor unlikely, likely, or certain.
1. A random selection will be made from a bag containing different colored disks. Of the 25 disks in the bag, 5 are yellow, so \( P(\text{yellow}) = \frac{5}{25} \).

   a. The probability that a yellow disk will be selected is \( \frac{5}{25} \).

   b. Complete the sentence to describe the likelihood of randomly selecting a yellow disk.

      It is \( \frac{5}{25} \) that a yellow disk will be randomly selected from the bag.

2. Sandra spins the pointer of a spinner. The spinner has four equal sections labeled 1 to 4.

   a. The probability that the pointer will land on a number less than 5 is \( \frac{4}{4} \).

   b. Complete the sentence to describe the likelihood of landing on a number less than 5.

      It is \( \frac{4}{4} \) that the pointer will land on a number less than 5.

3. Michael is planting a garden. The probability that a seed will produce a plant is \( \frac{9}{10} \).

   a. The probability that a seed will produce a plant is \( \frac{9}{10} \) %.

   b. Complete the sentence to describe the likelihood that a seed will produce a plant.

      It is \( \frac{9}{10} \) % that a seed will produce a plant.

4. A bag contains 80 colored tokens. Of all the tokens in the bag, 25 are black and \( \frac{51}{16} \) are red.

   a. Find, in percent form, the probability of choosing a black token and the probability of choosing a red token from this bag.

   b. Compare the likelihood of choosing a black token to that of choosing a red token.
5. Is the spinner shown a fair spinner? Explain why or why not.

6. Angela is using a number cube for a game with faces labeled 1, 2, 3, 4, 5, and 6. Is the number cube fair? Explain why or why not.

7. Of all 25 marbles in a bag, 3 of the marbles are white.
   a. What is the probability that a white marble will be randomly selected from the bag without looking? Write your answer as a percent.
   b. Describe the likelihood of randomly selecting a white marble from the bag.

8. Higher Order Thinking  Greg has a bag that contains 25 colored tiles. Of all the tiles in the bag, 10 are blue. Suppose another bag contains 250 colored tiles. Of all the tiles in this bag, 75 are blue. From which bag is Greg less likely to pick a blue tile? Explain.

9. Hector made some observations about the numbered cards before his friend turned them face down and rearranged them in a different order without Hector looking. Which of Hector’s statements is true if Hector randomly selects one face-down card? Select all that apply.
   - The probability that Hector will select a card numbered 1 is \( \frac{1}{8} \).
   - The probability Hector will select an odd-number card is greater than 50%.
   - It is certain Hector will select a card with a label that is greater than 0.
   - It is impossible for Hector to select a card labeled 2.
   - It is more likely that Hector will select a card labeled 0 than a card labeled 3.
A box contains 8 equal-sized tiles labeled A, A, A, B, B, B, C, and D. Jonah will randomly select one tile from the box. What is the probability that Jonah will select a tile labeled with the letter A? Describe this probability as impossible, unlikely, neither likely nor unlikely, likely, or certain.

There are 8 tiles. Two of the tiles have the letter A. The probability is 2 out of 8: \( \frac{2}{8} = \frac{1}{4} \).

It is unlikely that Jonah will select a tile labeled with the letter A.

A bag contains 5 green marbles and 2 purple marbles. Keisha will randomly select one marble from the bag. What is the probability that Keisha will select a green marble? Describe this probability as impossible, unlikely, neither likely nor unlikely, likely, or certain.

1. How many marbles are in the bag?
   7

2. The probability that Keisha will select a green marble is \( \frac{5}{7} \).

3. What is the probability that Keisha will select a green marble?
   \( \frac{5}{7} \)

4. It is \( \frac{1}{2} \) that Keisha will select a green marble.

On the Back!

5. A bag contains 10 black tiles and 10 white tiles. Caden will randomly select one tile from the bag. What is the probability that Caden will select a black tile? Describe this probability as impossible, unlikely, neither likely nor unlikely, likely, or certain.
   \( \frac{1}{2} \), neither likely nor unlikely

6. Angela is using a number cube for a game with faces labeled 1, 2, 3, 4, 5, and 6. Is the number cube fair? Explain why or why not.
   Not Sample answer: The sections are not the same size; the likelihood of spinning a 1 or 5 is greater than the likelihood of spinning a 2, 3, 4, 6, 7, or 8.

7. Of all 25 marbles in a bag, 3 of the marbles are white.
   a. What is the probability that a white marble will be randomly selected from the bag without looking? Write your answer as a percent.
      12%
   b. Describe the likelihood of randomly selecting a white marble from the bag.
      Unlikely

8. Higher Order Thinking: Greg has a bag that contains 25 colored tiles. Of all the tiles in the bag, 10 are blue. Suppose another bag contains 250 colored tiles. Of all the tiles in this bag, 75 are blue. From which bag is Greg less likely to pick a blue tile?
   The second bag, Sample answer:
   \( \frac{3}{10} = 0.3 \) and \( \frac{1}{3} = 0.333 \).
   The probability, 0.3, is less for the second bag, so it is less likely.

Assessment Practice

9. Hector made some observations about the numbered cards before his friend turned them face down and rearranged them in a different order without Hector looking. Which of Hector's statements is true if Hector randomly selects one face-down card? Select all that apply.
   a. The probability that Hector will select a card numbered 5 is \( \frac{1}{5} \).
   b. The probability that Hector will select an odd-numbered card is greater than 30%.
   c. It is certain that Hector will select a card with a label that is greater than 0.
   d. It is impossible for Hector to select a card labeled 2.
   e. It is more likely that Hector will select a card labeled 0 than a card labeled 3.