



interactive SCIENCE



WORKBOOK

Grade 3



SEMESTER

1

Name: _____

Class: _____

Teacher: _____

PEARSON

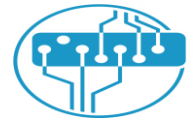
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GRADE 3

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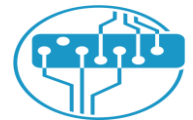
The Nature of Science



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WORKBOOK CHECKLIST



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Lesson 1: What Questions Do Scientists Ask? (use with pages 298 – 301)



Words to Know: Write the word next to the description it matches.

Inquiry

Scientists

Investigate

1. _____ - the process of asking questions.
2. _____ - to look for answers.
3. _____ - a person who asks questions about the natural world.



Explain: Tell if each statement is true or false. Explain your choice.

4. Everyone can be a scientist.

This statement is _____ because _____

5. All questions can be answered by investigations.

This statement is _____ because _____



Apply Concepts

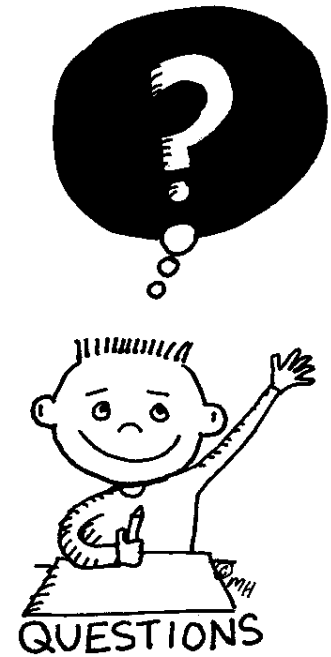
6. Think about where you live. What questions could you ask about it? What might you do to investigate?





7. Choose the correct answer: Encircle the questions that scientists might ask.

1. How can I grow bigger crops?
2. What is your favorite color?
3. What juice tastes best?
4. Which tree is taller?
5. What is the kindest animal?
6. How many days the seed need to germinate?
7. Which one is faster, the sound or the light?
8. What is your favorite country?
9. How many kilometers between Riyadh and Jeddah?
10. Does shrimp taste good?



Name: _____ Date: ____ / ____ / ____

Lesson 2: What Skills Do Scientists Use? (use with pages 302 – 307)



Words to Know: Write the word next to the description it matches.

Estimate

Infer

Predict

- 1. _____ - to use facts or prior knowledge to draw conclusions.
- 2. _____ - to tell what you think might happen in the future.
- 3. _____ - to make a careful guess.



True or False: Write T if the statement is correct and F if not.

- _____ 4. When you observe, you **use your five senses**.
- _____ 5. A satellite is a tool that help scientist **observe weather**.
- _____ 6. To estimate means to give an **exact measurements**.
- _____ 7. A measurement is a number that tells **how much or how many**.



Explain: Answer the questions below.

8. What is a measurement?

9. What does an anemometer help scientists measure?





Apply Concepts

10. A young flower is wilting. What can you infer about this flower?
What do you predict will happen next?



Name: _____

Date: ____ / ____ / ____

Lesson 3: How Do Scientists Answer Question? (use with pages 308 – 313)



Words to Know: Write the word next to the description it matches.

Experiment

Model

Survey

1. _____ - a list of questions or choices.
2. _____ - a copy of something.
3. _____ - an investigation carried out under carefully controlled conditions.



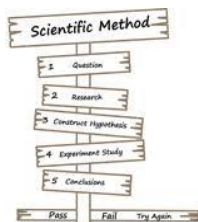
True or False: Write T if the statement is correct and F if not.

- _____ 4. Variables are things in an experiment **that can change**.
- _____ 5. A hypothesis is a **possible answer to your question**.
- _____ 6. For a fair test, you choose **three variables** to change.
- _____ 7. Records can be **notes, pictures, charts, or graphs**.
- _____ 8. Conclusion is a decision, made **based on recorded data**.



Explain: Answer the questions below.

9. What is the step after asking a question in a scientific method?



10. Why do scientists use models to study things?





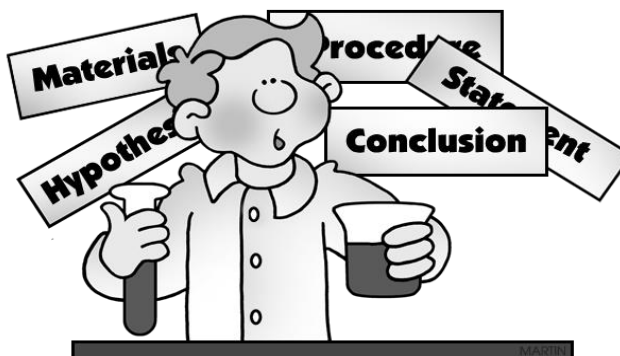
Apply Concepts

11. If a scientist wanted to study how often a plant needs water, what would be the best way to investigate it?



Arrange the scientific method in order.

	State your conclusion
	Interpret your data
	Collect and record your data
	Test your hypothesis
	Identify and control variables
	State your hypothesis
	Ask a Question



Name: _____ Date: ____ / ____ / ____

Lesson 4: How Do Scientists Communicate? (use with pages 315 – 319)**Words to Know: Write the word next to the description it matches.****Procedure****Chart****Bar graph**

1. _____ - a kind of list.
2. _____ - a plan for testing a hypothesis.
3. _____ - a display that helps you compare data and see patterns.

**Tell if each statement is true or false. Explain your choice.**

4. Scientists do each experiment only once.

This statement is _____ because _____

5. Other people should be able to follow a procedure.

This statement is _____ because _____

**Apply Concepts**

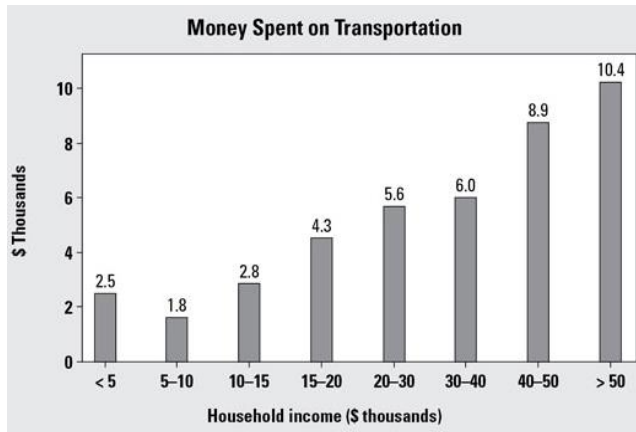
6. Think about how you communicate with your classmates.

What are some examples of communication in your classroom?





7. Fill in the blank with the following words (**chart - bar graph**)



1. _____

Study Time vs. Grades

Student	Study Time (hours)	Grade
Bob	2	84
Carlos	4	91
Cindy	5	92
Florence	3	89
Kim	4	88
Lori	4	93
Marisa	1	78
Pat	2	89
Thomas	5	94
Wendy	2.5	87

2. _____

Name: _____ Date: ____ / ____ / ____

Lesson 5: How Do Scientists Use Tools and Stay Safe? (use with pages 320 – 325)



Words to Know: Write the word next to the description it matches.

Tool

Unit of measure

Data

1. _____ - the quantity used to measure something.
2. _____ - an object used to do work.
3. _____ - pieces of information that you observe.

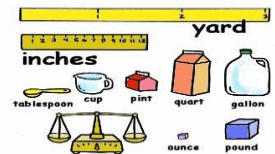


True or False: Write T if the statement is correct and F if not.

- _____ 4. Scientists use thermometers **to measure length**.
- _____ 5. A graduated cylinder can be used **to measure volume**.
- _____ 6. Binoculars are tools that help you **see far objects**.
- _____ 7. Microscopes use **simple lenses** to see objects.



Apply Concepts: Answer the questions below.



9. What are the three units of measurement?

10. What are the tools that can help you record data?





11. You want to do an experiment measuring the time it takes to walk ten feet. What tools would you use? What do these tools measure?



Matching: Match the picture with the correct word.

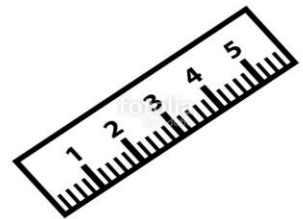
Thermometer



Ruler



Stopwatch



Binoculars



Name: _____ Date: ____ / ____ / ____

Lesson 1: What Is Technology? (use with pages 347 – 349)



Words to Know: Write the word next to the description it matches.

Computers

Technology

Vaccines

1. _____ - is the use of science knowledge to invent tools and new ways of doing things.
2. _____ - stores information.
3. _____ - are medicines that protect you from diseases.



True or False: Write T if the statement is correct and F if not.

- _____ 4. Solar panels **gather the sun's energy**.
- _____ 5. Scientific discoveries **usually made by scientists**.
- _____ 6. X - ray were discovered **10 years ago**.
- _____ 7. Vaccine is a **type of technology**.
- _____ 8. Satellite signals **can track the exact location** of a car.



Explain: Answer the questions below.



9. What are vaccines?

10. What problem might solar energy solve?



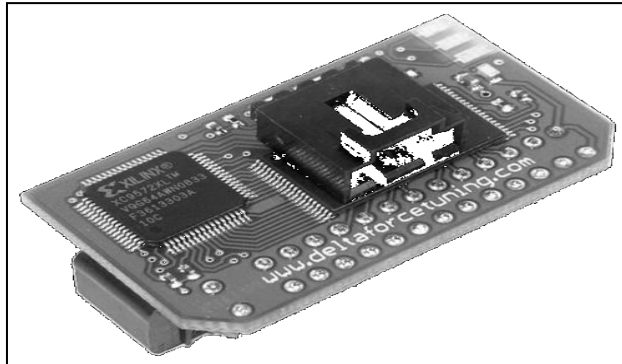


Apply Concepts

11. How do you use computer technology in your life?



Fill in the blank:



This is called _____, It can send and receive huge numbers of electronics data signals very quickly.

Name: _____ Date: ____ / ____ / ____

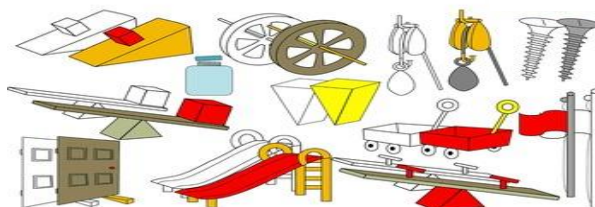
Lesson 2: What Is a Machine? (use with pages 350 – 355)**Words to Know: Write the word next to the description it matches.**

work	wheel and axle	wedge	lever
<i>inclined plane</i>	<i>pulley</i>	<i>screw</i>	<i>complex machines</i>

1. _____ - a ramp.
2. _____ - an inclined plane wrapped around a center post.
3. _____ - a machine that changes the direction of motion of an object to which a force is applied.
4. _____ - a stiff bar that rests on a support.
5. _____ - to use a force to move an object.
6. _____ - two slanted sides that end in a sharp edge.
7. _____ - a round wheel attached to a post.
8. _____ - are made up of simple machines that work together.

**True or False: Write T if the statement is correct and F if not.**

- _____ 9. An ax is an example of a **wedge**.
- _____ 10. Bicycle is a **complex machine**.
- _____ 11. Scissors are **simple machine**.
- _____ 12. A pulley **can change the direction** of a force.



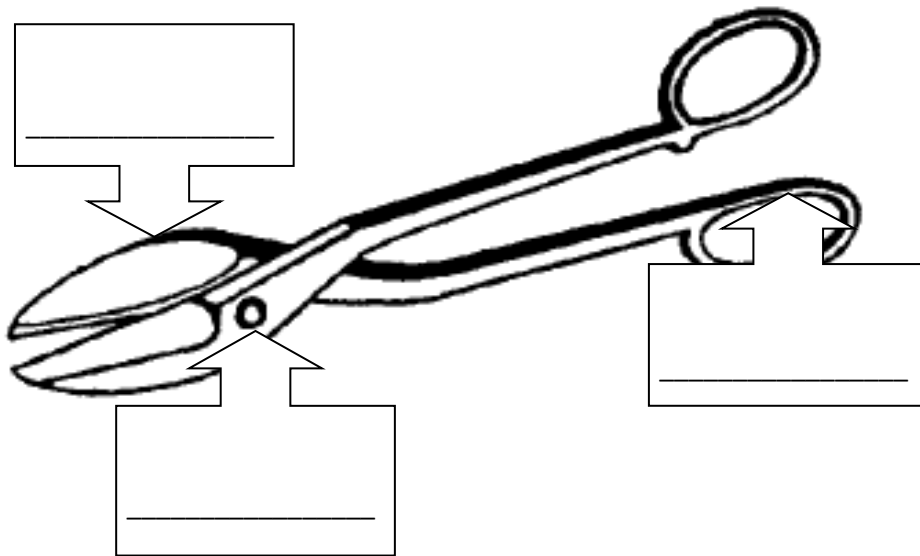


Explain: Answer the questions below

13. What is a complex machine?



Fill in the blank: label the simple machines that made up the shears



Name: _____ Date: ____ / ____ / ____

Lesson 3: What Is the Design Process? (use with pages 357 – 361)**Words to Know: Write the word next to the description it matches.****design process****research****prototype**

1. _____ - to look for facts about something.
2. _____ - a step-by-step method used to solve a problem
3. _____ - the first working product that uses a design.

**True or False: Write T if the statement is correct and F if not.**

- _____ 4. Identifying a problem is the **last step** in the design process.
- _____ 5. An engineer is **a person who designs new technologies**.
- _____ 6. There is only **one way** to research a problem.
- _____ 7. Evaluate means to find out **how something will work**.

**Read the steps of the design process. Number them in order.****Steps of the Design Process**

- | | |
|--|--|
| <input type="radio"/> Design and construct a prototype | <input type="radio"/> Communicate results |
| <input type="radio"/> Do research | <input type="radio"/> Evaluate and redesign |
| <input type="radio"/> Test the prototype | <input type="radio"/> Identify the problem |
| <input type="radio"/> Choose one solution | <input type="radio"/> Develop possible solutions |



Explain: Answer the questions below

9. What is the design process? How does it help engineers?



Apply Concepts

10. An engineer made a prototype of a new bike and tested it many times. Each time there was a problem with the brakes. How can the engineer use the design process to fix the prototype?



Name: _____ Date: ____ / ____ / ____

Lesson 1: How Can You Classify Plants? (use with pages 108 – 114)



Words to Know: Write the word next to the description it matches.

Flowering plant Nonflowering Spore Coniferous

1. _____ - a small cell that grows into a new plant.
2. _____ - a plant that produces flowers with seeds.
3. _____ - produces cones.
4. _____ - a plant that does not produce flowers.



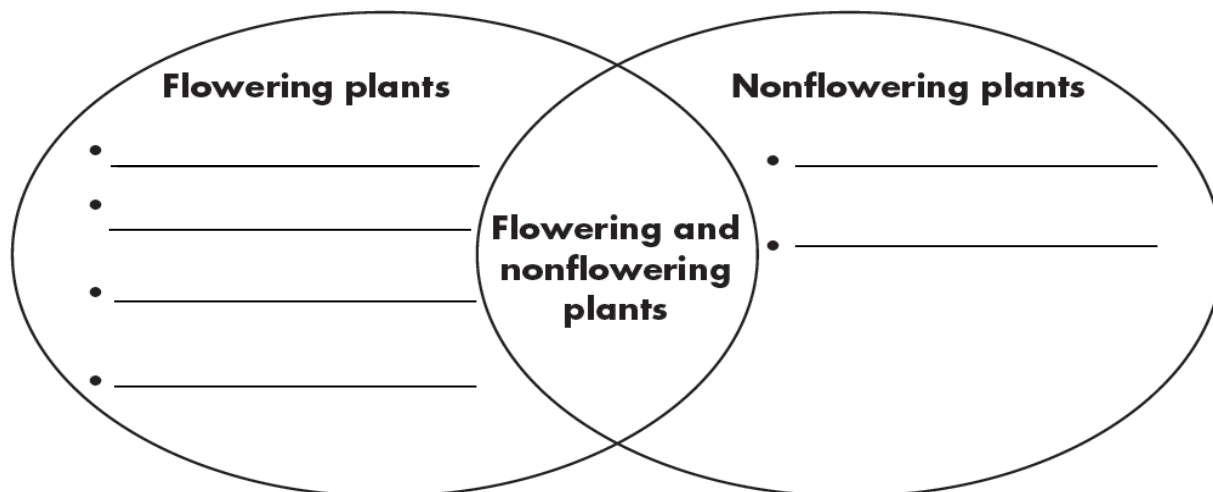
True or False: Write T if the statement is correct and F if not.

- _____ 5. You can classify plants **by their flowers or seeds**.
- _____ 6. Leaves fall off in dogwood trees **during summer**.
- _____ 7. Magnolia tree is a kind of **flowering plant**.
- _____ 8. Ferns and mosses are plants that **do not make seeds**.



Explain

9. Write at least two ways flowering and nonflowering plants are alike. Then write how they are different.





Apply Concepts

10. Look at the plant. Write three ways you could classify it.



Name: _____ Date: ____ / ____ / ____

Lesson 2: How Do Plants Use Leaves to Make Food? (use with pages 116 – 121)



Words to know: Write the word next to its definition.

Carbon dioxide

Oxygen

1. _____ - a gas in air that is absorbed by plants.
2. _____ - a gas in air that humans and animals need to live.



True or False: Write T if the statement is correct and F if not.

- _____ 3. Plants **do not need** food to live and grow.
- _____ 4. Plants **need energy from the sun** to make food.
- _____ 5. The stonecrop succulent **has waxy-coated leaves** to keep in water.



Explain: Tell if each statement is true or false. Explain your choice.

6. Plants do not need food to live.

This statement is _____ because _____



7. List three ways that leaves help plants.

a. _____

b. _____

c. _____





Apply Concepts

8. Study the diagram



Describe how the leaf gets the materials to make food for a plant.
