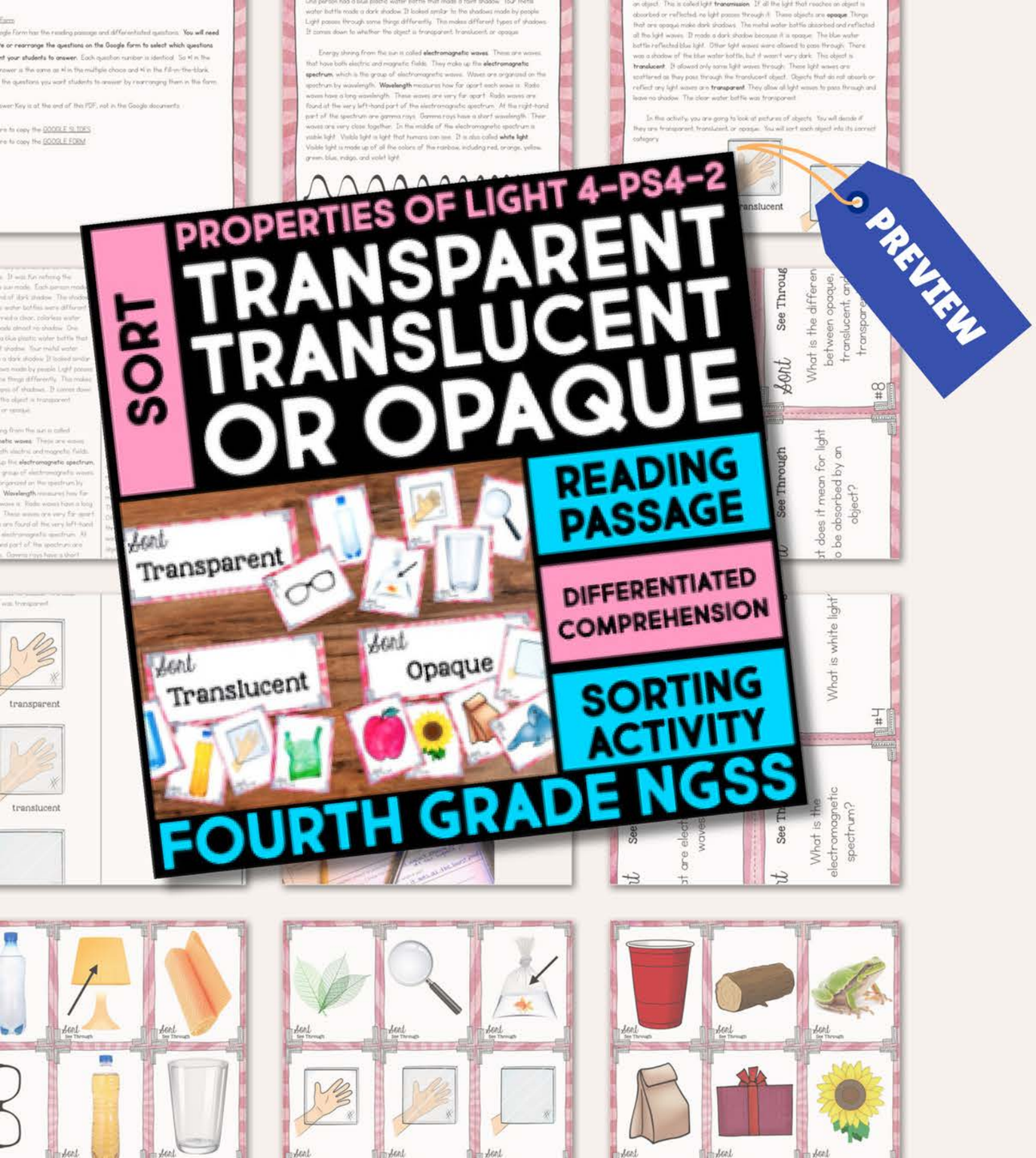


4TH GRADE

Sorting Light's Secrets

SORT

TRANSPARENT
TRANSLUCENT
OPAQUE SORT

4th grade Science Station

KEEP SCROLLING TO SEE WHAT'S INSIDE!

YOU WILL LOVE THIS BECAUSE



Engaging Content

Students explore transparency, translucency, and opacity. Students will need to use their critical thinking skills



Aligned with NGSS

These lesson plans aren't just random; they're laser-focused on Next Generation Science Standards. No more curriculum guesswork!



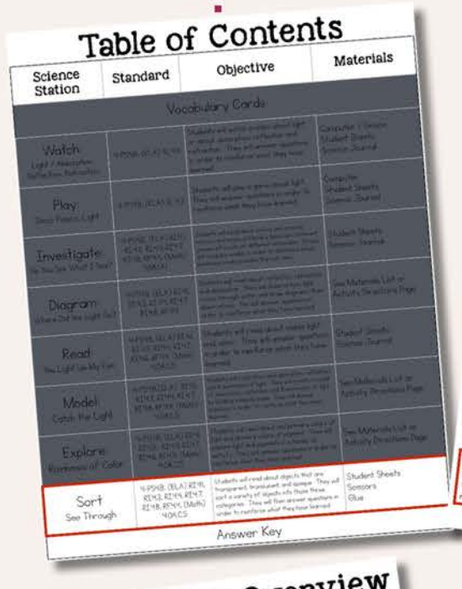
Real-Life Application

Students sort pictures of objects. Teachers can discuss how these properties impact everyday objects, from windows to eyeglasses.

ACTIVITY OVERVIEW

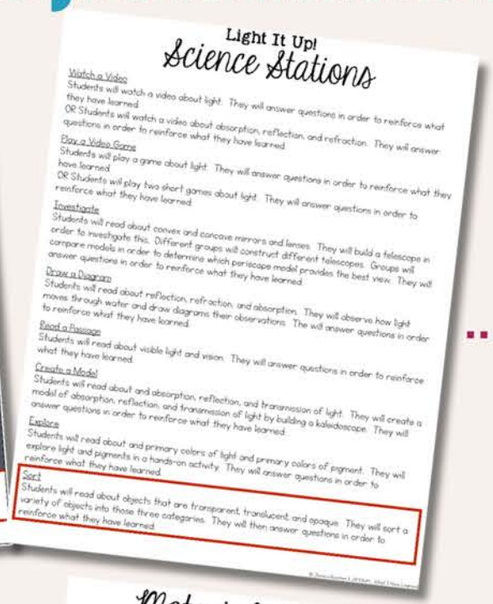


- **Your students will read a passage.**
- **Then your students will sort objects into 3 categories; transparent, translucent, and opaque.**
- **Lastly, your students will answer questions based on their sorting activity.**


Table of Contents

Science Station	Standard	Objective	Materials
Vocabulary Cards			
Watch			
Play			
Investigate			
Diagram			
Read			
Model			
Explore			
Sort			

Answer Key


Light It Up!
Science Stations

Watch a Video
Students will watch a video about light. They will answer questions in order to reinforce what they have learned.
OR Students will watch a video about absorption, reflection, and refraction. They will answer questions in order to reinforce what they have learned.

Play a Video Game
Students will play a game about light. They will answer questions in order to reinforce what they have learned.
OR Students will play two short games about light. They will answer questions in order to reinforce what they have learned.

Investigate
Students will read about convex and concave mirrors and lenses. They will build a telescope in order to investigate this. Different groups will construct different telescopes. Groups will compare models in order to determine which periscope model provides the best view. They will answer questions in order to reinforce what they have learned.

Draw a Diagram
Students will read about reflection, refraction, and absorption. They will observe how light moves through water and draw diagrams their observations. The will answer questions in order to reinforce what they have learned.

Read a Passage
Students will read about visible light and vision. They will answer questions in order to reinforce what they have learned.

Create a Model
Students will read about and absorption, reflection, and transmission of light. They will create a model of absorption, reflection, and transmission of light by building a kaleidoscope. They will answer questions in order to reinforce what they have learned.

Explore
Students will read about and primary colors of light and primary colors of pigment. They will explore light and pigments in a hands-on activity. They will answer questions in order to reinforce what they have learned.

Sort
Students will read about objects that are transparent, translucent, and opaque. They will sort a variety of objects into those three categories. They will then answer questions in order to reinforce what they have learned.


Science Stations Overview

Watch a Video
At this station, students will watch a video relevant to the topic and answer questions. You have the option of the included worksheet with the questions or use task cards and have students respond in their science journals.

Play a Video Game
Students play an online video game and answer questions about the experience. You have the option of the included worksheet with the questions or use task cards and have students respond in their science journals.

Investigate
Students use materials to investigate the science topic by following directions and recording results. Students answer questions about the investigation.

Draw a Diagram
Students draw and label a diagram specific to certain requirements. Students then explain how their diagram meets the requirements.

Read a Passage
Students read a short passage about the topic and answer questions about the information in the passage. You have the option of the included worksheet with the questions or use task cards and have students respond in their science journals.

Create a Model
Students use materials to illustrate the science concept and answer questions. You have the option of the included worksheet with the questions or use task cards and have students respond in their science journals.

Explore
Students create a sample and manipulate it using the new science concepts they have learned. Students answer question based on the effects.

Sort
Students sort cards into groups or put them in a specific order. Students record the sort and then describe their reasoning.


Materials Checklist
Light It Up!

Use the following checklist to make sure you have all the materials for your stations.

Watch a Video
- ☐ Computer / Device
- ☐ Directions Card
- ☐ Worksheet
- ☐ Task Cards
- ☐ Science Journal

Play a Video Game
- ☐ Computer
- ☐ Directions Card
- ☐ Worksheet
- ☐ Task Cards
- ☐ Science Journal

Create a Model
- ☐ Directions Cards
- ☐ Student Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Pen
- ☐ Kaleidoscope
- ☐ Mylar or silver reflective paper
  - ☐ This is sometimes called "Shimmer Sheets," mirror board, or mirrored paper. You can also buy it in rolls. You will need this for the Diagram station as well. Both of these stations work best with thicker reflective paper than the thinner shiny paper used in Mylar balloons and wrapping paper.
- ☐ 3 strips cut the same length as the paper towel tube and 1½ inches wide (makes the triangular kaleidoscope)
- ☐ 4 strips cut the same length as paper towel tube and 1¾ inches wide (makes the square kaleidoscope), and one strip as long as the paper towel tube and wide enough to fit inside as a reflective lining (makes the circular kaleidoscope)
- ☐ Scotch tape
- ☐ Masking Tape (optional decorative craft tape)
- ☐ Paper towel rolls (or 2 toilet paper rolls taped together)
- ☐ Clear contact paper
- ☐ Materials to make the colored end. Colored permanent marker, small round beads, small sequins, small triangles of tissue paper, etc.
- ☐ Optional: Markers or paint to decorate the outside of the roll. You may want to have the students do this a day in advance.

Sort
- ☐ Directions Card
- ☐ Sort Cards
- ☐ Scissors
- ☐ Glue
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal

Investigate
- ☐ Student Directions
- ☐ Student Worksheet
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal

Draw a Diagram
- ☐ Student Instructions
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Quart-sized jar or 900 mL beaker
- ☐ Pitcher of water
- ☐ Popsicle stick (or anything long and straight)
- ☐ Flashlight
- ☐ Mirror (large enough for a child to see his/her face)
- ☐ Cardboard (at least 6" x 6")
- ☐ Mylar or silver reflective paper (This is sometimes called "Shimmer Sheets," mirror board, or mirrored paper. You can also buy it in rolls. You will need this for the Model station as well. Both of these stations work best with thicker reflective paper than the thinner shiny paper used in Mylar balloons and wrapping paper.)
- ☐ Prism
- ☐ Book

Read a Passage
- ☐ Reading Passage
- ☐ Student Response Sheet
- ☐ Task Cards
- ☐ Science Journal

Explore
- ☐ Directions Card
- ☐ Worksheet
- ☐ Response Sheet
- ☐ Task Cards
- ☐ Science Journal
- ☐ Red, blue, and yellow paint (can be any type of paint)
- ☐ Paintbrushes (either 6 brushes or a way for students to wash brushes between uses)
- ☐ Paper or cloth towels (for cleanup and drying wet brushes)
- ☐ Plastic tray for mixing paint colors
- ☐ Red, blue, and green plastic sheets (Yoplait Colo Sheets, for example)—Cut pieces that are slightly larger than the light end of the flashlight.
- ☐ 3 Bright LED Flashlights
- ☐ Scotch tape
- ☐ Smooth, white vertical surface to shine lights on (poster board, paper taped to a wall, projector screen, etc.)
- ☐ Colored pencils, crayons, or markers - red, green, blue, magenta, cyan, yellow

Table of Contents

Background Information

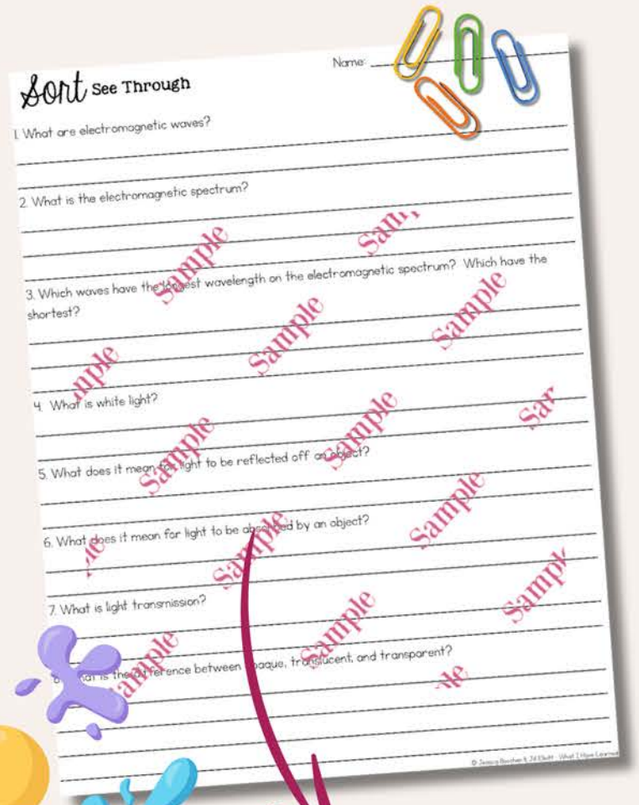
Materials Checklist

Science Station Overview

Reading Passage & Sorting Activity



DIFFERENTIATED QUESTIONS



SHORT ANSWER



FILL-IN-THE BLANK



TASK CARDS:
SHORT ANSWER & MULTIPLE CHOICE

TEACHERS LOVE IT!

This would be perfect for a 4th grade class. I did use it with a smaller grade level to help explain words to my ELL students when practicing light words .

Christina M.



Used in Science centers along with several other activities. The sort was very helpful for students.

Ashley S.



My passion is making learning accessible to all students.
I love scaffolding learning, breaking down the concepts and building them up so that students can see the connections.
I love figuring out the small components that build up to the big ideas and helping students see it all.



teach MATH | teach SCIENCE | teach READING | teach WRITING

What I have LEARNED