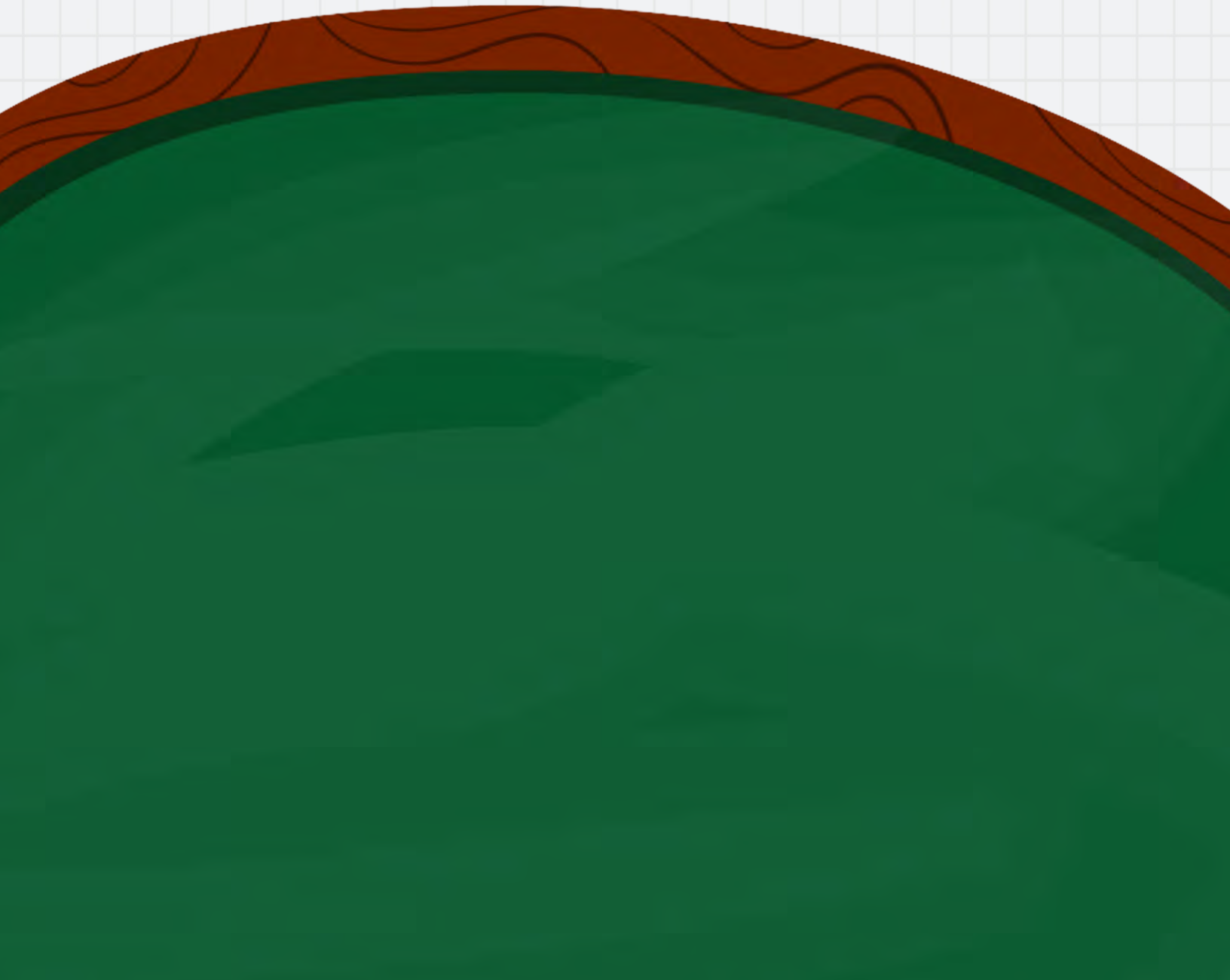




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GRADE 1 SCIENCE





SCHOOLIO ONTARIO CURRICULUM

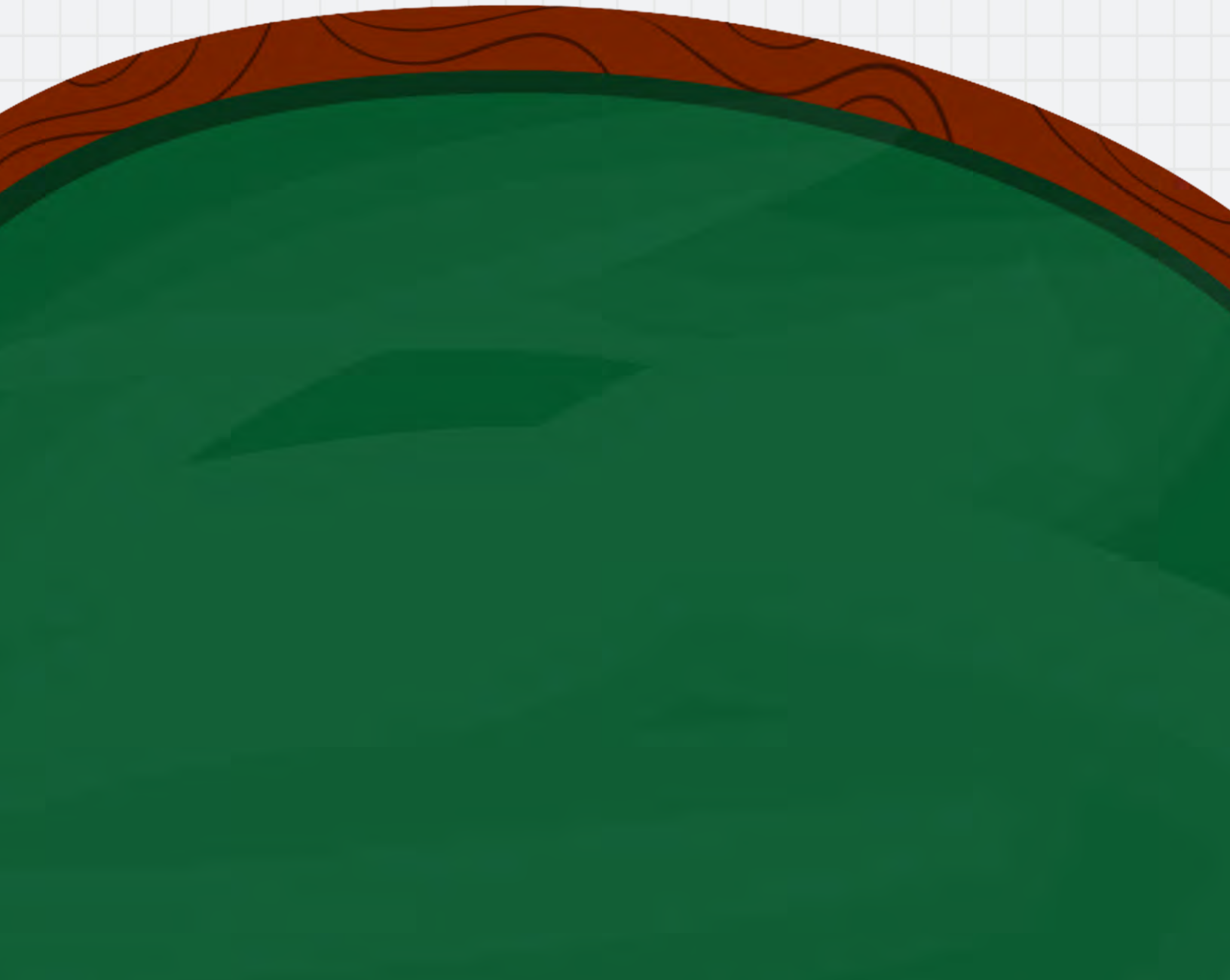
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**GRADE 1 SCIENCE: STRUCTURES
AND MECHANISMS**




Lesson 1 – Material Properties and Characteristics

Discussion:


-  A material is a substance, or substances, which we can use to make objects.
 - ✓ For example – glass, wood, stone, metal, cotton, plastic - are all materials.

-  Materials have different properties - these are the ways we might describe the material.
 - ✓ For example:
 - Metal is cool, smooth, and strong
 - Glass is smooth, see-through, and breaks easily
 - Stone is rough, strong, and heavy
 - Cotton is soft, flexible, and not strong

-  We could also call properties a characteristic. A characteristic is a quality or feature of an object.
 - ✓ For example, an object could be small or big, round or square, strong, durable, flexible and stable. You can identify it by looking at its colour or feeling it.

Activity:

Put an object in a box or bag, and let your child put their hand in the bag without looking at the object. Then, make them guess what is inside with their touch. Encourage your child to describe the object by focusing on its characteristics (smooth, sharp edges, jagged, sharp, etc).

-  The properties of a material help the material to perform its function.
 - ✓ For example:

- If you were to build a house, you would want to choose materials that are strong and solid, rather than materials that may be soft or flexible
- If you were to make a pair of mittens, you would want to choose materials that are soft and fuzzy, rather than materials that may be cold or pointy
- If you were to make a pair of scissors, you would want to choose materials that were smooth and sharp, rather than materials that may be bendable or rough



The properties of the material help to determine what we would use it for.

Activity:







Material Properties

Practice Work:

Complete Canadian Curriculum, pg. 302-303








Material Properties


Imagine you had to choose which materials would be used for the creation of each of the items below. What properties would you want in the material you chose? Circle your preferred property of the two choices.

Item	Properties	
Building 	Hollow	Solid
Bridge 	Strong	Squishy
Trampoline 	Flexible	Solid
Sweater 	Rough	Soft
Skating Rink 	Smooth	Bumpy
Baseball Bat 	Flexible	Rigid

Lesson 2 – Where Materials Come From


Discussion:

-  Materials are what objects are made from.
-  Materials can come from nature or they can be made by humans.
 - ✓ Materials straight from nature:
 - Wood, Wool, Cotton, Stone, Sand, Glass, Soil
 - ✓ Materials taken from nature and changed:
 - Paper (from trees), Paint (from oil), Glass (from sand), Brick (from clay)
 - ✓ Metals are natural materials that are found underground, some are them fixed with other materials.
 - Gold, Silver, Tin, Aluminum, Copper, Steel, Brass, etc
 - ✓ Human Made Materials:
 - Plastic, Fleece, Cardboard, Fibreglass, Polyester, Nylon
-  Recycled materials are materials that were something else, and are reused into something new.
 - ✓ Toilet Paper (recycled from old paper)
 - ✓ Fleece (recycled from old plastic water bottles)
-  One thing to consider when we choose materials is the environmental impact.
-  We do not have unlimited resources on the Earth. We need to preserve what we have, and reuse what we can.
-  We need to recycle as much as we can.
-  We need to keep the 5 Rs in mind:
 - ✓ Respect: Respect our environment by making good choices and considering the impact of our decisions.
 - ✓ Rethink: Rethink what we need and do, try to make better choices, choose items that can be recycled when we are done.
 - ✓ Reduce: Reduce the resources we are using and only take what we need. Try not to be wasteful.
 - ✓ Reuse: Reuse things for a new purpose, and repair things when possible
 - ✓ Recycle: Recycle as much as we can when we are done with it.

 What are some ways we can/do follow the 5 Rs in our home?

✓ Some suggestions:

- Use refillable water bottles
- Use both sides of a sheet of paper, or use a personal sized white board
- Put used paper and cardboard in the recycling bin
- Reuse or recycle glass bottles, cans, and plastic

 Some things we do in our home:


- ✓ _____
- ✓ _____
- ✓ _____


Practice Work:

Complete Canadian Curriculum, pg. 306-309


Lesson 3 – Our Course of Action

Discussion:

 Even when we all do our best to follow the 5 Rs, we all have ways we are still sometimes wasteful and could do better.

 Remember the 5 Rs from last day.

- ✓ Respect: Respect our environment by making good choices and considering the impact of our decisions.
- ✓ Rethink: Rethink what we need and do, try to make better choices, choose items that can be recycled when we are done.
- ✓ Reduce: Reduce the resources we are using and only take what we need. Try not to be wasteful.
- ✓ Reuse: Reuse things for a new purpose, and repair things when possible
- ✓ Recycle: Recycle as much as we can when we are done with it.

 Can you identify some ways in which your household is wasteful?

- ✓ Some areas could be:
 - Garbage: Throwing things out that could be recycled, repurposed, or repaired.
 - Water: Letting water run when you aren't actively using it (while brushing teeth, for example).
 - Food: Taking more than you can eat, or buying more than you need that goes bad and gets thrown out.
 - Energy: Leaving lights or electronics on you're not using, running machinery like washer or dishwasher when they aren't full
 - Toys & Clothing: Having more than you need, replacing things that still fit, replacing broken things you were careless with.

Activity:

We are going to plan and carry out a Family Course of Action to minimize waste.



Family Course of Action



Now you've thought of some ways you could waste less in your home, make a plan of action! Think about 3 specific ways you could be less wasteful (ie. "I will use a refillable water bottle rather bottled water.", or "I will replace paper napkins with washable cloth ones.", or "I will eat the fruit for a snack before a snack wrapped in plastic so it isn't wasted by going bad.") and explain why that action is important, or how it will help the environment.



In my household we will try to reduce waste in these specific ways:

1. _____.

This action is important because _____

2. _____.

This action is important because _____

3. _____.

This action is important because _____



I will follow the 5 Rs to help us reduce waste!

