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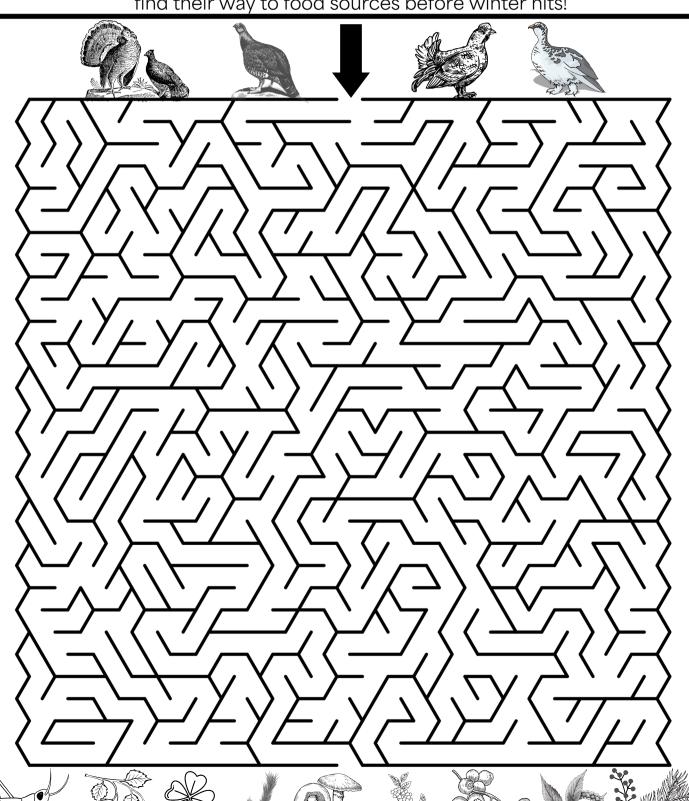






### **GROUSE MAZE**

Help the Ruffed Grouse, Spruce Grouse, Sharp-tailed Grouse and Willow Ptarmigan find their way to food sources before winter hits!



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### **WORD BUILDING**

How many words can you make from the proper names of Ontario's Grouse species. You don't have to use every letter each time. (If you run out of room continue on the back.)

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RUFFED GROUSE			SPRUCE GROUSE
SHARP-TAILED GROUSE			

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# CREATE! (40 min.)

JK to Grade 3

Design Your Own Grouse

You'll need: Cardstock or construction paper (brown, grey, black and white - you could get paper for a background as well if you choose), scissors, crayons or pencils, and glue. Smartboard to view Ontario's 4 grouse species images (Ruffed grouse, Spruce Grouse, Sharp-Tailed Grouse and Willow Ptarmigan).

Set Up: Set up the Smartboard and begin by examining images of Ontario's grouse species. Make a chart for students to give their thoughts on important physical features of Grouse.

#### Explanation:

- Show the 4 different Grouse Species images to the students and explain that we will be making our own grouse today. Grouse have many things in common between species that make them all similar. First, we must identify what elements of grouse we need in order to make a recognizable image of a grouse. We are looking for a round body, oval wing shape with a pointed tip, short neck, round head with a short, curved beak, black eyeball, and a tail (either pointed, fanned, or more square and short depending upon the species). You can explain that although there are many things each species has in common, they also have key differences. Discuss what those differences are, and make a list of key features for each species, if you choose to.
- Explain to students that they will pick one species. We will be making each element of their chosen grouse species and then putting them together. Have students sketch out basic patterns on construction paper or cardstock: an oval for the body, a pointy oval wing, a long neck with a rounded head and curved beak, and a set of tail feathers that matches the species they chose.
- Then make adjustments and cut the pieces out. Use crayons or pencils to draw details on the
  wing, body and tail pieces and begin to glue the elements of each grouse together, either
  separately or onto the background paper. Display grouse images for the class to see and compare
  different species chosen.



You'll need: A smartboard or dry erase board, dry erase markers or a stylus.

Set Up: Write on the board "What eats grouse?" and leave room for a list.

#### **Explanation:**

- Explain to students that one of the biggest things that dictates where grouse can live and stay is having habitat with good cover. Their need for cover means that they require very thick, dense stands of young growth to help protect them from predators on the ground and from in the air.
- Ask students to list the animals who these birds might need to hide from, or risk becoming dinner!
   What species would love to make a delicious meal out of a grouse? Hint: there are many of them in Ontario!









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# CHALLENGE! (45 min.)

Grades 4-8

Can You Drum Like a Ruffed Grouse?

**You'll need:** A smartboard and speaker, various art and found materials that could be used to recreate sounds (ie. a sheet of plastic/tarp, empty frame/tennis racquet, cups, paper plates, and whatever materials you can think of or have the class contribute).

**Set Up:** Load the Grouse Drumming video (https://musicofnature.com/mary-holland/ruffed-grouse/) onto the smart board, you may also want to google "Grouse Drumming Sounds" for more, different sounding examples for your students to reference.

#### **Explanation:**

- Explain to students that Ruffed grouse make a very unique sound, and once you recognize it, it's a special sound that is synonymous with Spring-time. How many of them can explain or mimic what they sound like? How do they think this sound is produced?
- Show them the video (https://musicofnature.com/mary-holland/ruffed-grouse/) and ask them to observe closely. What do they think is making that sound? The wings hitting their body? The wings moving through the air? Are they beating against their chest to make this sound? Have students watch the entire video and allow them to speculate/postulate. What does this sounds remind them of? Oftentimes, people mistake the sound of a Grouse's drumming as someone in the distance trying to start up a motor unsuccessfully!
- Explain that in looking at evidence, scientists discovered how this sound is produced. Frame-by-frame analysis proved that the wings were striking nothing but air—hard and fast enough to produce popping sounds that ran together into the whirring drum, hence the nickname for Ruffed grouse, Drummers. Male ruffed grouse perform this ritual on the same log, rock, pile or raised area, each year. This area is known as a Lek. Males do this in order to attract females in to them to mate, and also to communicate to other males that are around that this is their territory.
- If materials are already present, explain to students that they will use various materials (whatever you have on site, students bring in, or can imagine may work is great. The possibilities are endless). If materials are not at hand, have students bring materials in.
- Have students work in pairs or small groups and examine different materials and methods to make this sound. They can exchange with others to find the best setup they can produce that they think sounds like a Ruffed Grouse's drumming.
- Tell students that they will now be presented with the opportunity to perform their best grouse drumming sound for a jury of their classmates. Each pair or group will go up and perform their best mimic of the "drumming" sound. Students will listen to each, and if you prefer, you can always reference back to actual recorded "drumming" sounds for the students to be able to compare and contrast.
- After all teams have had a chance to perform for the class, take a vote and decide who the winner
  is.
- This team will be known as the "Classroom Grouse" and will be able to claim bragging rights.
- Debrief with students by discussing what methods seemed to work for them? What materials created the best sound? What materials created a sound that was nothing like the Drumming sound?
- Now if we were Ruffed Grouse, what challenges could we face using only sounds to attract mates? What dangers are there due to making such a loud and obvious noise?







