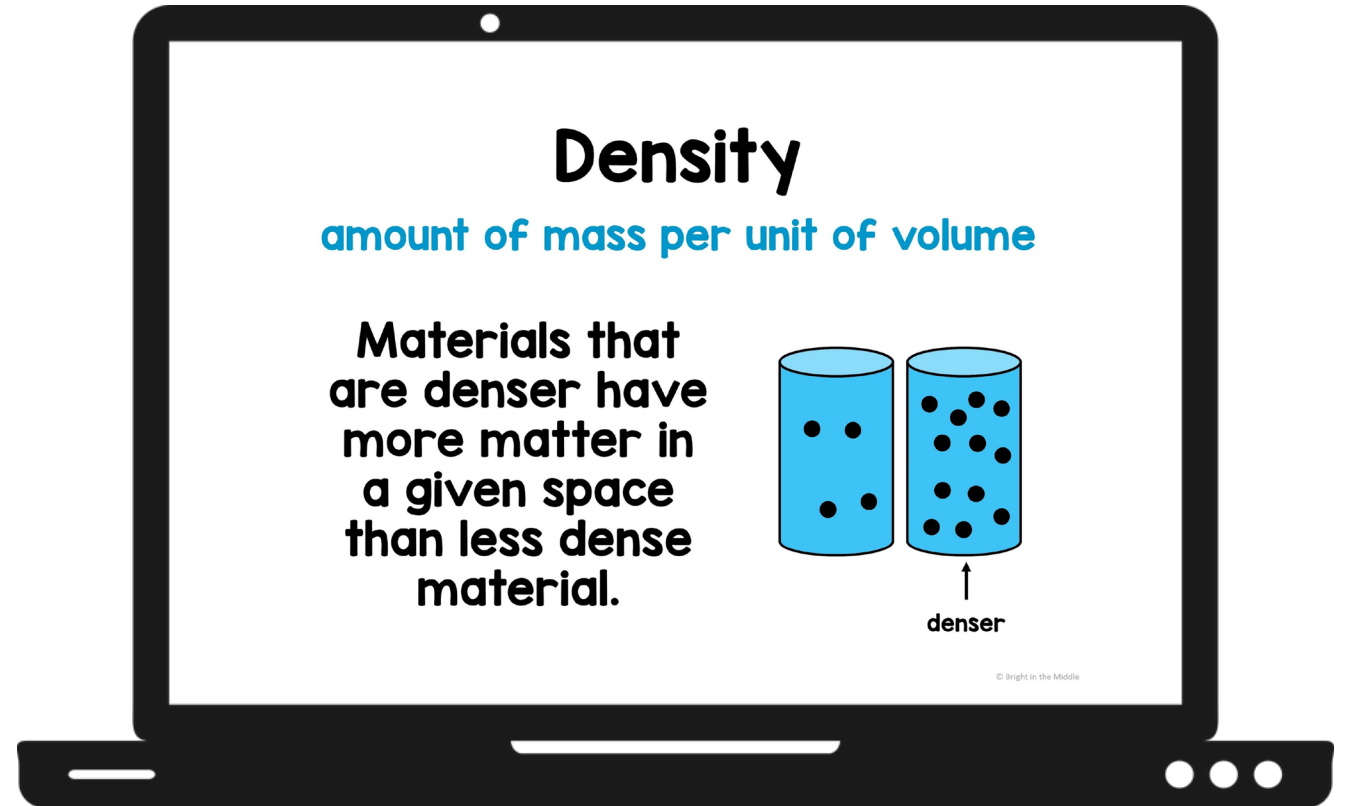


Physical Properties of Matter

Interactive Lesson


PRINT and DIGITAL



Compatible with Google Slides and PPT

Volume
amount of space occupied
by a substance

- usually measured in cubic units such as cm^3 , m^3 , and ft^3



A key is also included!

...to the correct answer. ←

If the size of the substance changed in the last two examples, the density would also change.

True

False

© Bright in the Middle

Drag and Drop

Drag the circle to the correct response.

Which of the following is
NOT an example of a pure
substance?:

- gold
- gravel
- diamond
- water

In the chart below, drag the term to the correct location to label the solute and solvent of each solution. The first one is done for you.

Solution	Type of Solution	Solute	Solvent
carbonated water	gas in liquid	carbon dioxide	water
sugar water	solid in liquid		
vinegar	liquid in liquid		
sweet tea	solid in liquid		
air	gas in gas		
chocolate milk	liquid in liquid		
coffee	solid in liquid		

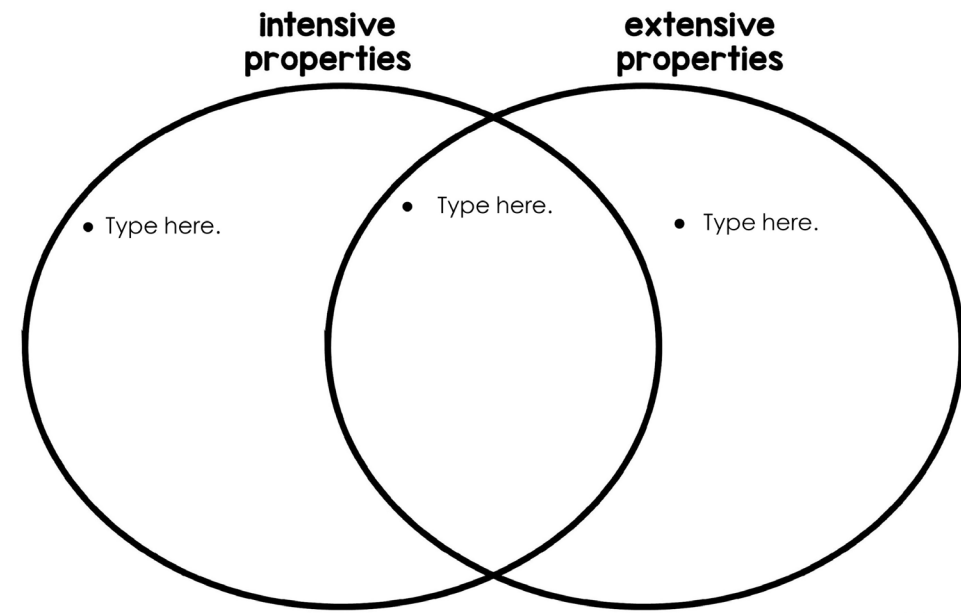
oxygen
coffee beans
acetic acid
water
iced tea
sugar
water
nitrogen
chocolate syrup
milk
water
sugar

Type in the Text Box

Why would the boiling point be a good way to identify an unknown liquid? Type your answer in the text box below.

Type here.

In the diagram below, compare intensive and extensive physical properties.



and more!

Using the highlight tool, in the story below, highlight examples of intensive physical properties in yellow and examples of extensive physical properties in blue.

A group of friends decided to go on a camping trip to learn more and enjoy the outdoors. They began to set up their tents and started a fire. In the process, they noticed a variety of natural materials all around them.

One of the friends, Roxy, picked up a piece of wood and wondered if it's made of a certain type of wood.

Her friend, Jeremiah, wondered how long the wood was and how wide it was. He thought about it, the density of the wood, and the color of the wood.

Roxy then said, "This reminds me of a science class I took in middle school. I wonder what other materials they had going above the ground."

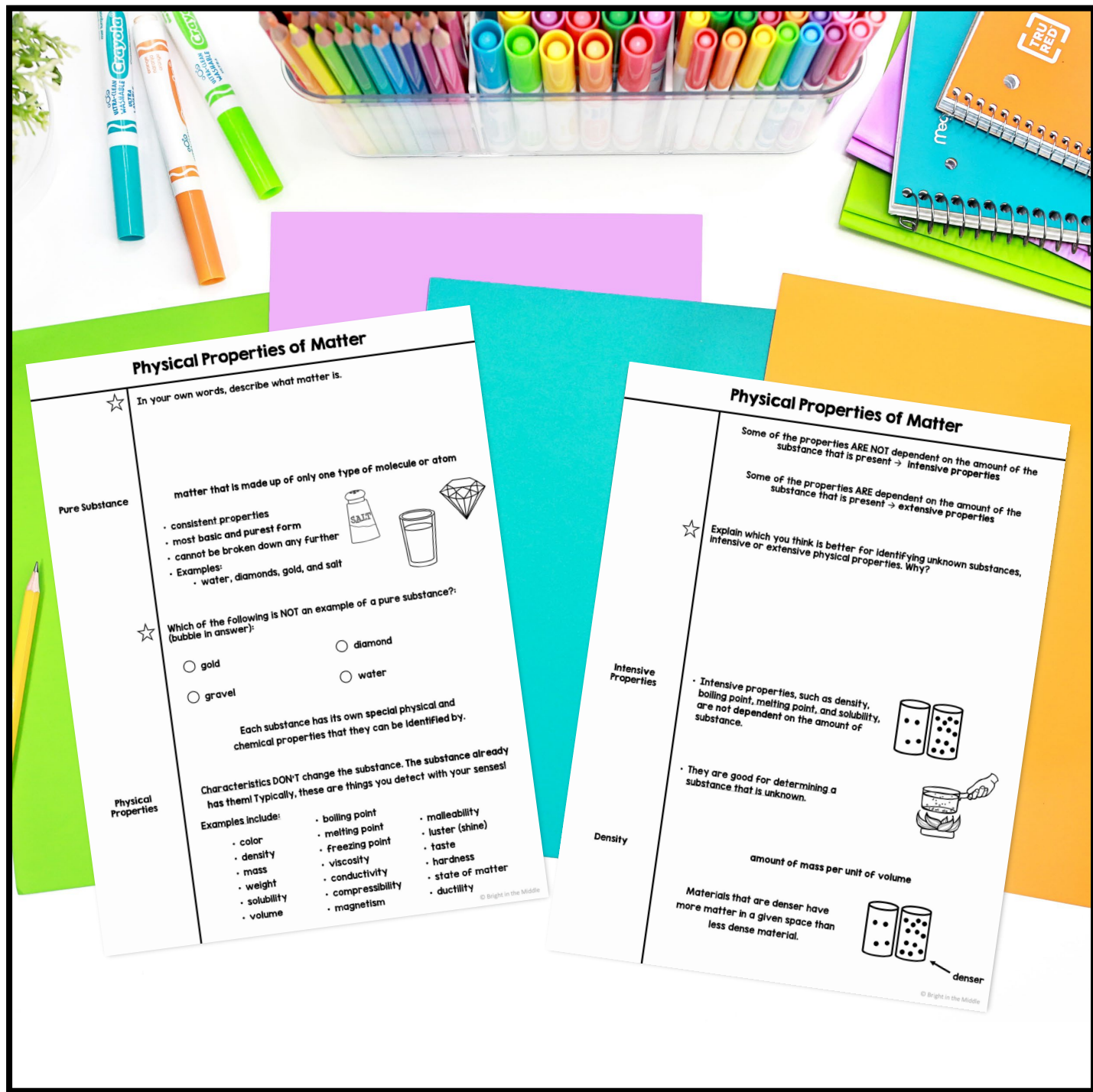
As it got darker outside, the friends continued to talk about the science lesson still on their minds. They talked about the different colors of the wood and the different textures that they roasted, and the different uses of the wood.

They were amazed at all the different materials and many scientific concepts they learned about during their trip.

The melting point of materials can also vary due to factors such as pressure and purity. Here are some examples of the melting points of various materials.

Material	Melting Point (°C)
Water	0
Iron	1,538
Gold	1,064
Copper	1,085
Lead	327
Aluminum	660

A paper version is also included with interactive activities embedded.



Ways to Use Digital Interactive Lessons

Science digital interactive lessons are a great way to teach or review science content with your students for many reasons.

They are fun. They are engaging. Another reason, which I think is the most important, is that they help decrease the cognitive load. The way that digital interactive lessons are set up is first, a little bit of content, and then practice with that content, and repeat the process.

Students can digest small chunks of information a little at a time, apply that information, and then learn more! This will help keep their attention.

So, now, what are some ways that you can use them in your middle school science classroom?



Individual Learning

One way that interactive lessons can be used in the classroom is just for individual learning. These are digital lessons, so students can pull up the lesson on their computer, either via Google Classroom, Microsoft Teams, PowerPoint, or whatever you use in your classroom.



Students read through the lessons themselves and **work through the practice** at their own pace.

The benefits of doing this are that students can work at their own pace and you, as the teacher, can walk around the classroom as they are learning to answer any questions that they have. In addition, you can see what that particular student is learning. As you walk around the room and view their work, you can use it as a formative assessment to see if they are understanding the material.

You can also bump it up a notch. Since students will be working using the computer, you can embed related YouTube videos in the lesson for extra enrichment!

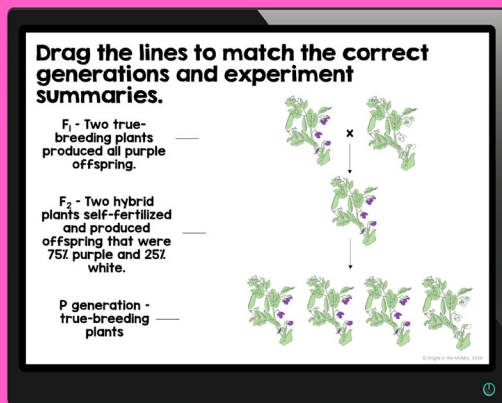
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INTERACTIVE
Lessons
for**

INDIVIDUAL LEARNING



Distance Learning

Digital interactive science lessons are a great tool to use for individual learning at a distance for the middle school science classroom.



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DISTANCE LEARNING

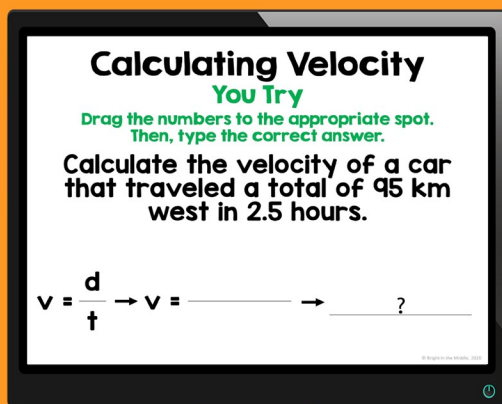
Students can read through the material, and after digesting chunks at a time, they can apply the information with embedded practice slides.

After completing the lessons, students can submit their work to their teacher.



Small Groups/ Partners

This works similarly to having students working as individuals except that students have the opportunity to work with one another. I think that this an awesome approach to differentiated learning in the classroom.



In small groups, or in partners, students are able to read the lesson together, discuss each practice slide, and apply the information together.

I prefer this method in many ways because I believe in the power of cooperative learning. As a teacher, you still have the opportunity to walk around and help the individual students as needed, but students also have each other for support.

Digital Science
INTERACTIVE
Lessons
for

**SMALL GROUPS/
PARTNERS**



Direct Instruction

As mentioned, digital interactive lessons are set up as a lesson with embedded practice to help decrease the cognitive load. If teachers choose to, they can pull up the lesson and teach it to their students and still take pieces of content and digest them bit by bit.



For example, when teaching about **pedigree charts**, the teacher can first discuss what a square and a circle represent in a pedigree chart.

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Lessons
for

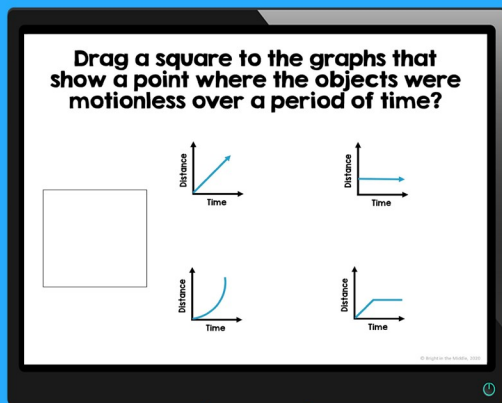
DIRECT INSTRUCTION

After students digest this material, the teacher can ask students to discuss how they will remember this information and then apply the information in practice.



Science Centers

Digital interactive science lessons can be used in one of two ways for science centers. First, science centers on a particular topic. For example, say you are teaching distance-time graphs, and you are ready for students to complete science centers on this topic. You can have a center for a [digital interactive lesson](#) (make groups in Google Classroom, or another platform), [task cards](#), [story match](#), and a reading passage.



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Lessons
for

SCIENCE CENTERS

Another way that you can use interactive science lessons for science centers is only using digital interactive lessons. Time to review for a [genetics](#) test? You can have stations set up where students will move around the room.

They can work through individual lessons such as Gregor Mendel and an Introduction to Genetics, Asexual and Sexual Reproduction, Mitosis and the Cell Cycle, Meiosis, Punnett Squares, Pedigree Charts, and Variation of Traits and Genetics Disorders. This route may take more than one day. It just depends on how long your classes are and how much time you can devote to review. I personally like the first approach to using digital interactive lessons as a science center.



For ELL Students

With technology, there are so many awesome opportunities for students that do not speak English as their primary language to learn science content in schools that speak predominantly English. That goes vice versa as well. If you are trying to learn in any language you are unfamiliar with, technology is here to help!



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for

ELL STUDENTS

There are many options that students can use to learn science material. As a teacher that only speaks English, you can imagine how difficult it is to teach a student that speaks another language. I'm sure there are other teachers out there with the same dilemma.

With technology, I have been able to give my students the science lesson and have them use Google translate in order to understand what the lesson is saying. Now, I'm working on creating digital science lessons in Spanish, so that one step is taken out.



Enrichment/ Tutoring

I know that many schools set up a time during the day just for enrichment/tutoring.



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**ENRICHMENT/
TUTORING**

Many schools only set up this time for reading/math, but some do science too! Especially those that test in science. Interactive lessons are a great way to review standards-based science material and practice!

