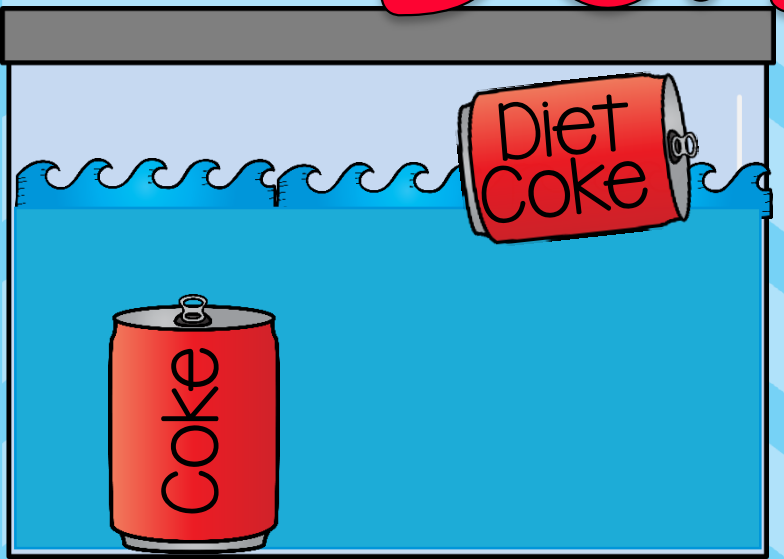
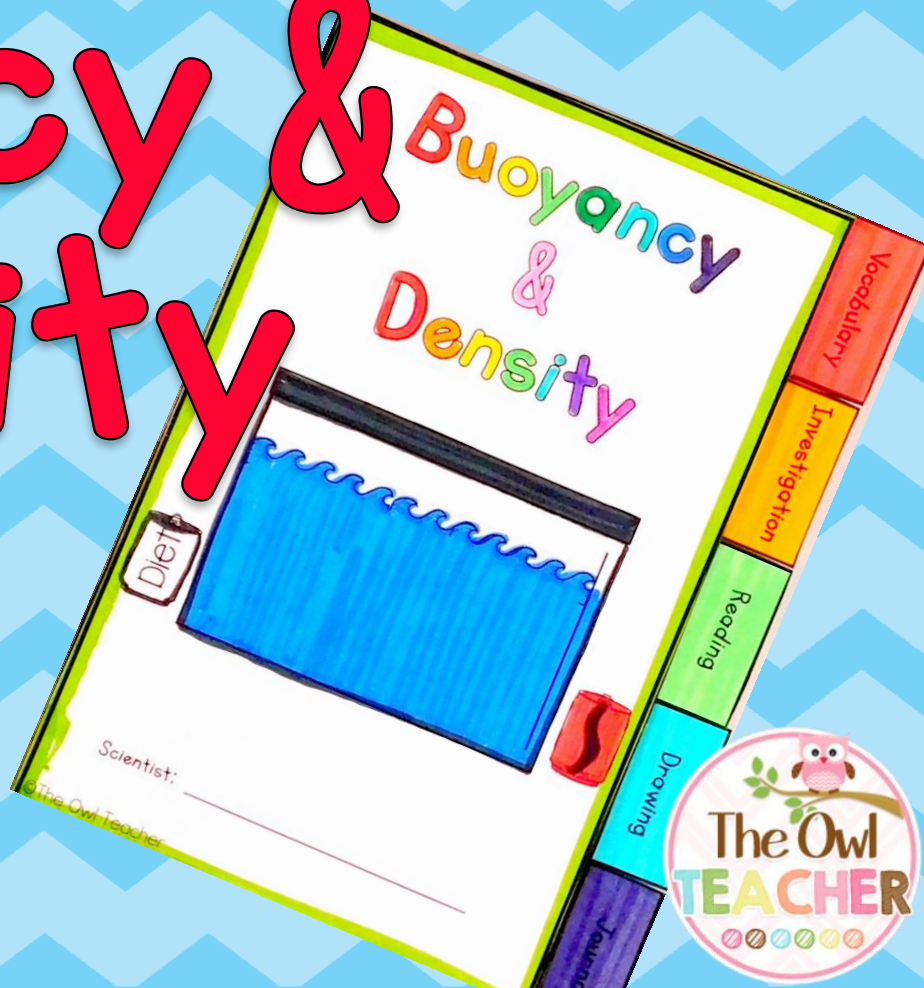
Science Booklets

Differentiated & Student Centered

Buoyancy & Density





The Owl TEACHER

Teacher's Page

Unfortunately, with the large demands on reading and math from Common Core, science is often pushed to the side. If your district is like mine, you often have very little time to dedicate to science, yet are still expected to fully cover the entire curriculum. This packet was created to help save time and to cover the all important science concepts - all while still meeting the nonfiction criteria of Common Core.

In this packet you will find a mini-book for students to assemble and explore the critical science concepts. It can be used to teach, reinforce, and/or challenge students, all while meeting their needs and learning styles. The reading page has been differentiated for your students with one being a higher level (two stars) and the other being a lower level (one star).

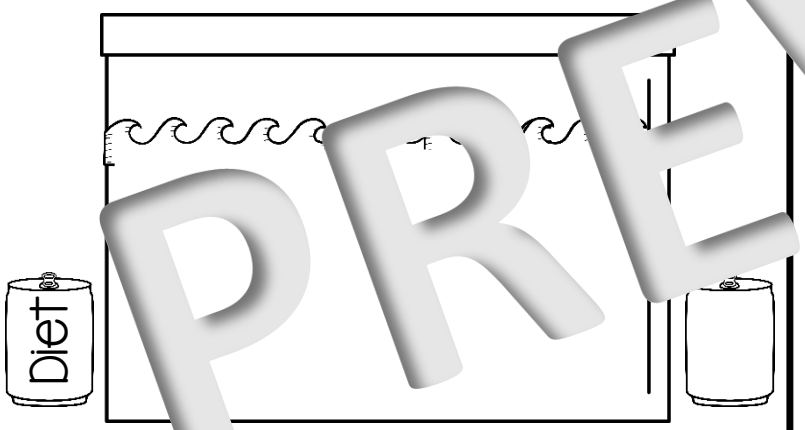
The tabs in this booklet can be used as science stations. The first tab contains an important vocabulary activity related to the science concept of buoyancy and density. It can correspond with the reading piece provided. The second tab focuses on the investigation to deepen the understanding of buoyancy and density and how it works. The third tab asks comprehension questions related to the reading piece and requires students to support their answers with textual evidence. Additionally, this tab explains the investigation more thoroughly. The fourth tab asks students to draw, while the fifth tab prompts students to respond to a thought-provoking journal question.

I personally use all of my products in my classroom and can testify to the effectiveness of them.

Easy Use:

*Print pages 3-5 single sided (two sided copying will not work). Also print page 9 and/or 10 for students to use as their reading piece and page 11 for station use.
*After making class copies, provide each student with scissors and a glue stick. You can also staple or tape if you prefer.
*Have students color before cutting - including the tabs. This makes the piece look attractive.
*Have students cut out all flipbook pages. The cover page goes first. Then the students should line up the tabs for each page, in view, similar to steps.
*Have students run a line of glue along the left edge of each sheet. When finished the final product should resemble a small tabbed notebook.
*Have students complete each page individually, in pairs, in groups, or as a whole class. This can also be used in small groups with your direction.

Buoyancy & Density



Scientist: _____

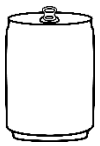
Vocabulary

Vocabulary

Directions: There are three vocabulary words you should know. Write the meaning of the word and then draw a picture of it.

	Meaning	Picture
forces		
buoyancy		
density		

Investigation



Directions: Follow the directions on the Investigation sheet and then write your response below.

1.) Predict what you think will happen when you place both cans of soft drinks in the water.

_____

_____

2.) What did you observe happen

_____

_____

3.) y do think happ d?

_____

_____

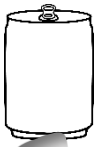
4.) Do you think the type of soft drink matters?

_____

_____

Investigation

Reading



Directions: Read the sheet titled "What Just Happened?" and then answer the following questions with complete sentences. Be sure to suppo ur answers.

1.) In you wor xplai h e c float d why the ca unk

_____

_____

_____

2.) at happens if an object has more density than water?

_____

_____

_____

3.) What causes an object to have buoyancy?

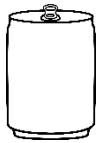
_____

_____

_____

Reading

Drawing



Directions: Based on what you read and observed in your investigation, draw what happened and write below why you think that happened.

Drawing

Journal

Directions: Read the prompt below and respond with deep thinking. Use the checklist at the bottom to make sure you included proper writing ski

We ha mined th he di ere s i e veete s causes the sity ch at els ight fluence e erimen ain y inking.

Excellent Writing Checklist:

Did you remember...

- ☐ Capitals
- ☐ Spelling
- ☐ End marks
- ☐ Complete sentences

Journal

What Just Happened?

You just placed two cans of soft drinks into water, yet one floated and the other one sunk. They were the exact same size can and they both had the same amount of liquid in it according to the details on the can. So how can this be?

An object floats when it **displaces**, or pushes aside, a certain amount of liquid such as water. If it displaces more than the object's weight in liquid, it will float. If it displaces less water than the object, then the object will sink. When an object floats it is said to have **buoyancy**.

Density, or how much fits in a certain space, decides how much liquid is displaced. If the object has more density than water it will sink. If it has less density than water, it will float.

When the regular soft drink was placed in the water it sunk. That means that soft drink must have more density than the diet soft drink and is more dense. The diet soft drink would then have more buoyancy because it has less density. In other words, the combined ingredients in a regular soft drink must have more mass in the can than a diet soft drink.

If you look at the ingredients in both cans, you will see that the regular soft drink has more sugar than the diet. The diet soft drink uses artificial sweetener. Artificial sweetener is hundreds of times sweeter than regular sugar, so less is needed to produce the same taste. That means less is used in the can, and that there are less ingredients packed in that space of the can.

Thank You So Much!

Thank you for downloading my product! I hope you found this resource useful.

I know your time and money are important, so therefore I try to create products that are worth both. Anytime you see something that could be improved upon or any errors, please inform me, as I desire to do well. Feel free to contact me if you have any questions, ideas, or concerns at deshawtammy@gmail.com.

Keep an eye out for more resources that are free or reasonably priced, as I am always creating new products!

You can also follow my blog at http://theowlteacher.blogspot.com for lots of creative instructional ideas and free downloads. By following me, you'll get updated notices about new ideas, products, and sales. My products are always 50% off the first 48 hours so follow me for those notifications!

Happy Teaching!

Tammy

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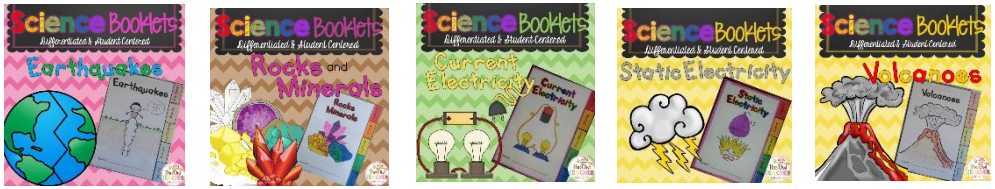

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