Intentional Instruction

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Levels of Difficulty for Addition and Subtraction

Level 1
- Join, Result unknown Part + Part
- Separate, Result unknown Whole - Part
- Part/Part/Whole, Whole unknown Part + Part

Level 2
- Join, Change Unknown (There were 7 birds in the tree. Some more birds flew to the tree. Now there are 9 birds in the tree. How many birds flew to the tree?) Count on, or subtract to find the answer. You know the whole amount and 1 part so subtract to find the answer.

- Separate, Change Unknown (Cindy picked up 6 shells from the beach. She dropped some on the way home. When she got home she had only 2 shells. How many shells did Cindy drop?) Count back or subtract to find the answer.

Level 3
- Comparison, Difference unknown (There are 5 birds in the tree and 3 birds on the ground. How many more birds are on the ground than in the tree?)

- Part-Part-Whole, Part unknown (George found 8 coins on the beach. 4 of the coins are pennies, and the rest are nickels. How many nickels does George have? Missing part

Level 4 (appropriate for 2nd grade and up)

- **Join**, Start unknown (There are some birds in the tree. 4 more birds flew to the tree. Now there are 12 birds in the tree. How many birds were in the tree to begin with?) missing part so subtract to find the answer

- **Separate**, Start unknown (There were some shells on the beach. Max picked up 6 of the shells. Now there are 8 shells on the beach. How many shells were on the beach to start with?) missing whole so add

- **Compare**, Larger unknown (There are 4 more birds in the tree than on the ground. There are 3 birds on the ground. How many birds are in the tree.)

- **Compare**, Smaller unknown (There are 3 fewer starfish than shells on the beach. There are 8 shells on the beach. How many starfish are on the beach?) missing part

- Music activates and synchronizes neural networks which increase the brain's ability to reason spatially, think creatively, and perform in generalized mathematics. (Jensen, 2001)
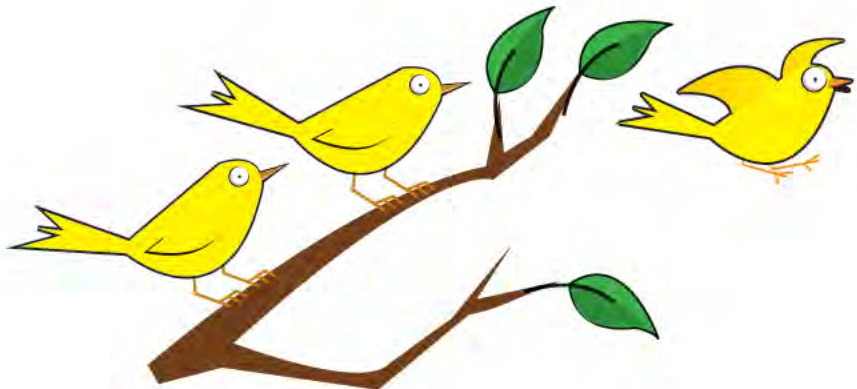
ADDING PARTS (theme to Gilligan's Island)

Just sit right back and I'll tell you how
To always find the sum.
Just add all parts to get the whole,
And then your job is done.

Sometimes the parts must become joined,
And sometimes they're apart.
But parts plus parts will give the whole.
You'll learn the facts by heart.

SUBTRACTION (Wheels on the Bus)

When some leave the group, that's take away.
take away.
take away.
When some leave the group, that's take away.
How much will stay?

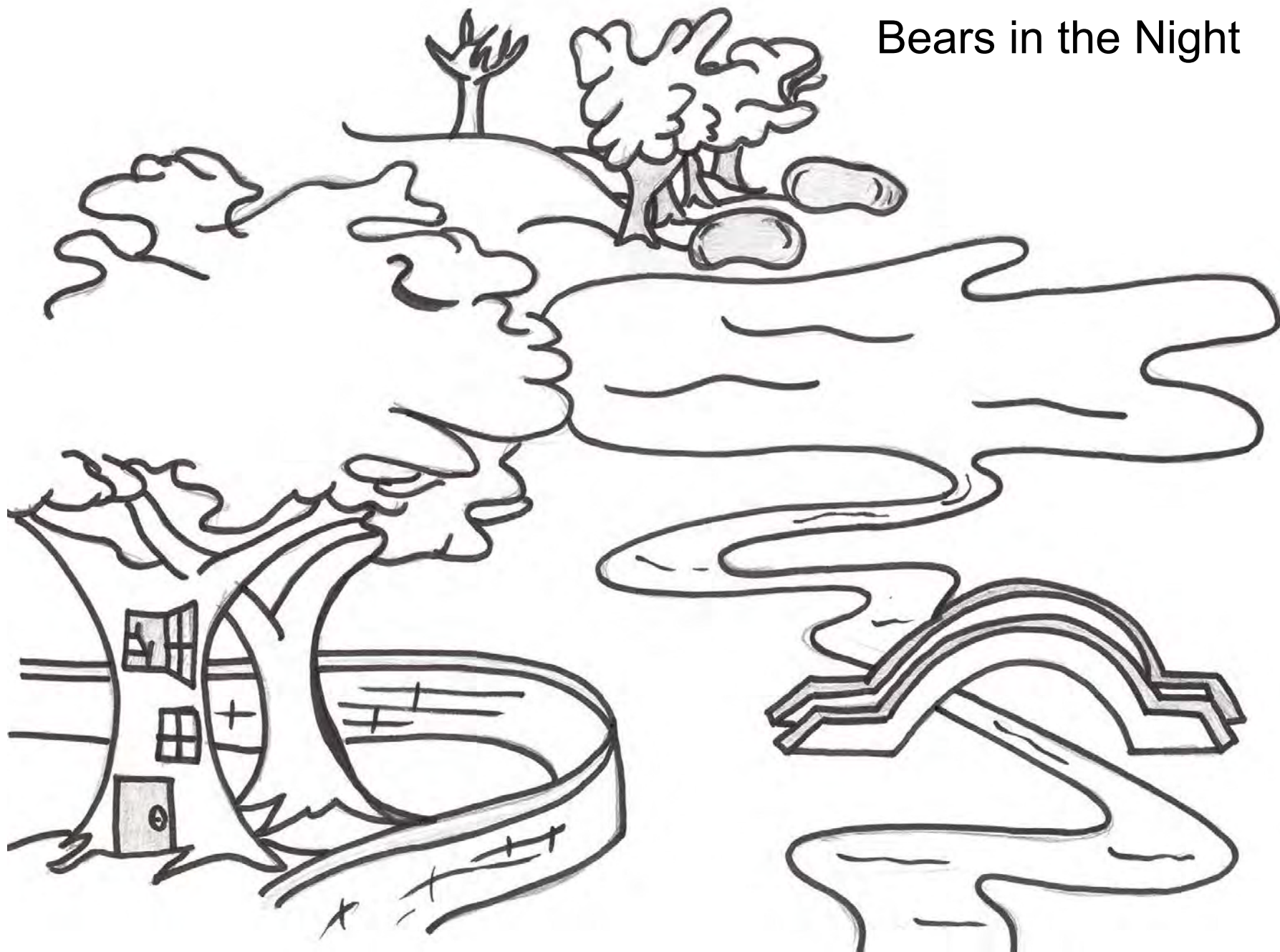The whole less a part means to subtract.
to subtract.
to subtract.
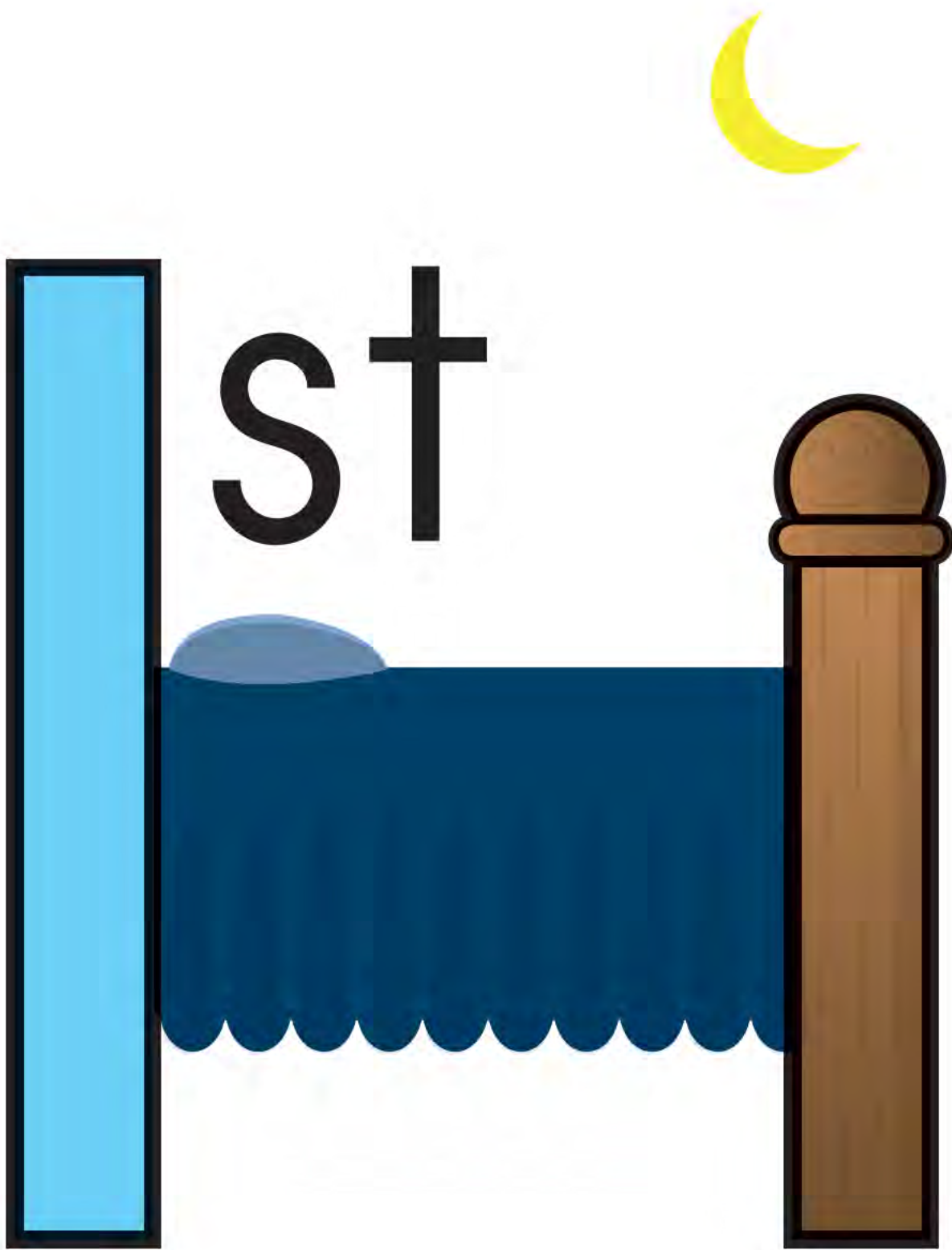The whole less a part means to subtract,
That is a fact!

How much more is here than over there?
over there?
over there?
How much more is here than over there?
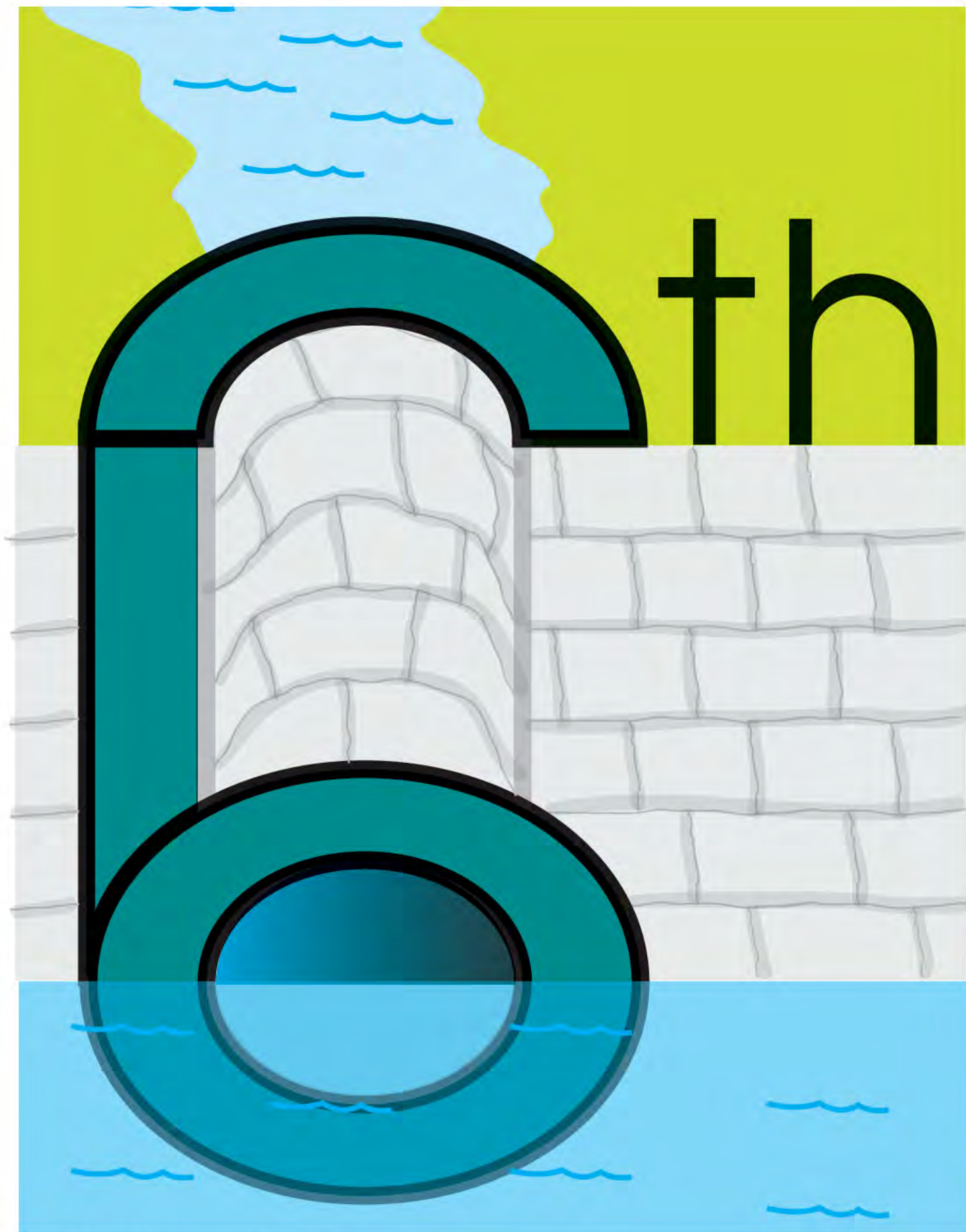Subtract to compare.

Bears in the Night

1st
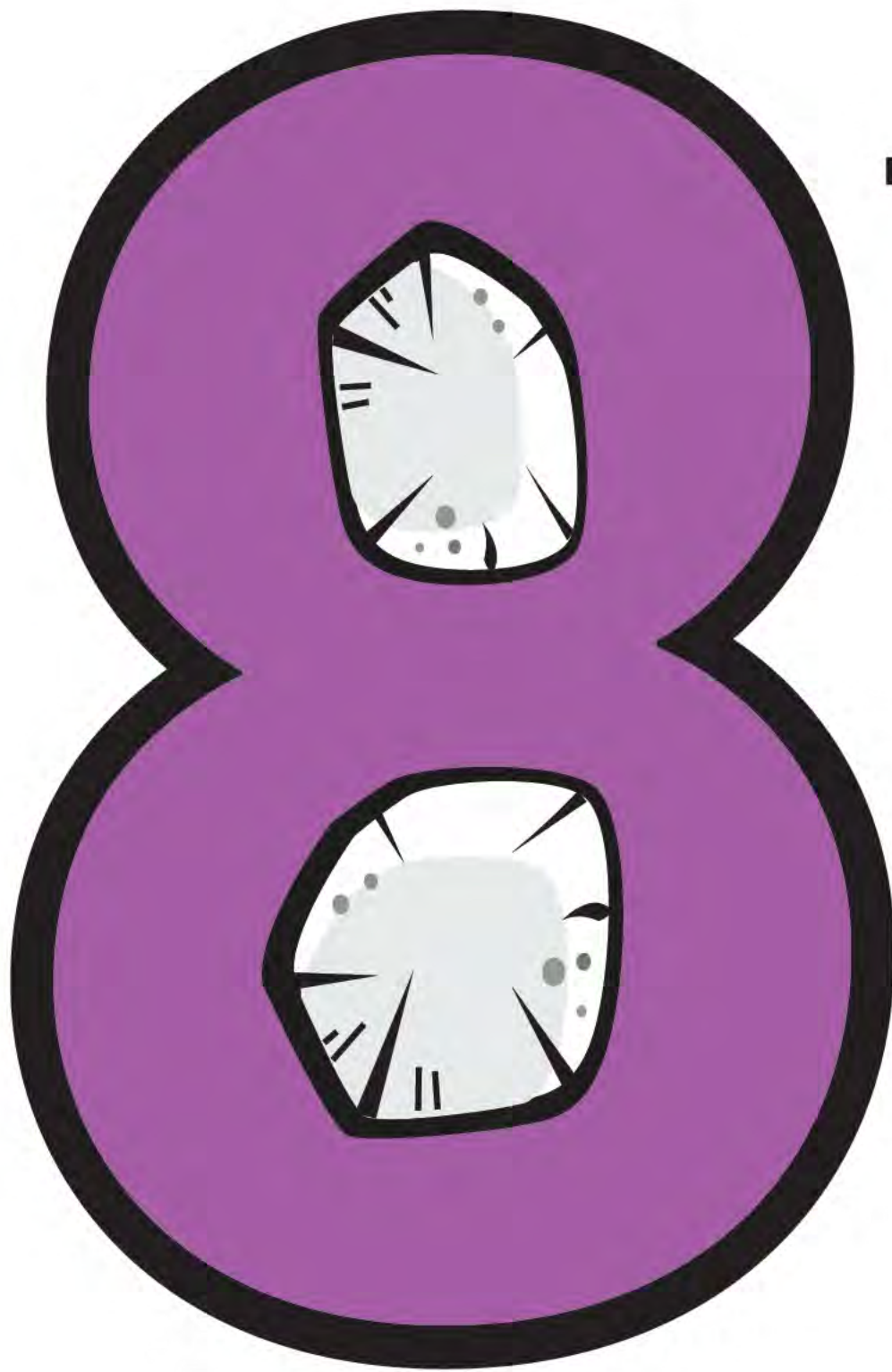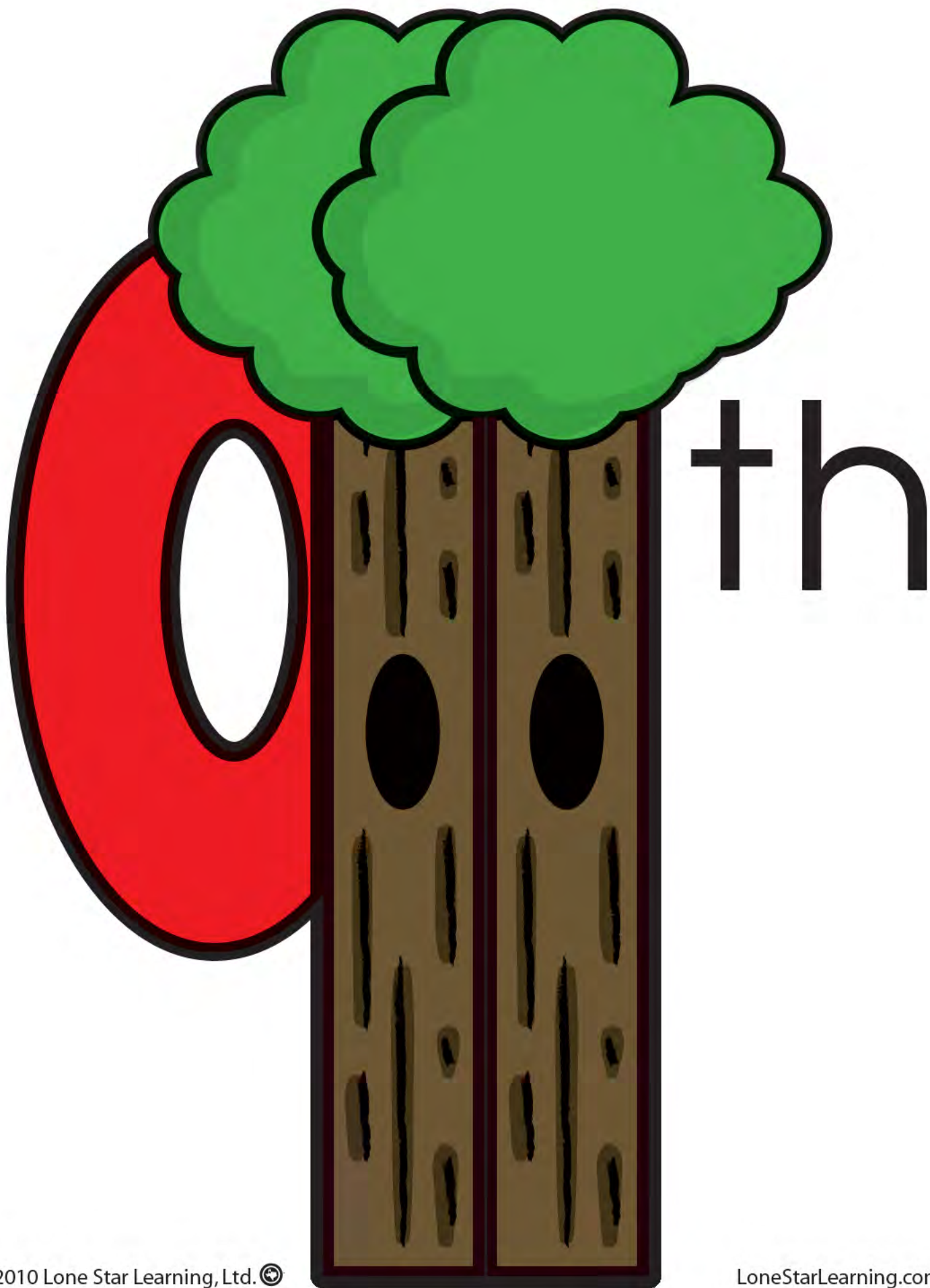
2nd

3rd

4th

5th

th

7th

8th

9th

10th