Small Group Strategies

A Guide for Use with Speak Agent Activities

Speak Agent℠

Why use small groups?

1. Increase student engagement in learning.
2. Increase student use of mathematical language by getting ALL students involved in thinking, speaking, and listening.
3. Build student confidence in mathematics.
4. Deepen understanding by putting students in the role of explainer.
5. Teach vital collaboration skills in math.

What kinds of work can happen in small groups?

There is too much to list here! But below are four kinds of work we will highlight in this presentation:

1. Active thinking about the learning process
2. Peer teaching
3. Collaborative learning and discourse
4. Reflection, error analysis, and confidence-building

Four suggested strategy pairings:

	Speak Agent Activity	Strategy Pairing to Try
	Read Along	KWL Charts
	Drawing Board	Each One, Teach One
	Word Gallery	Think-Pair-Share
	Level Up	Activity Reflection

KWL Charts

A graphic organizer that helps students actively think about the learning process.

Pairs with:

Read Along

HOW IT WORKS:

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Present the Read Along topic to your class.
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```
Hand out KWL charts. Print extra copes of the next page as handouts!
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```
Students complete the K and W columns.
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```
Ask students to do the relevant Read Along.
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Monitor and guide students as they reflect.
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```
Students complete the L column.
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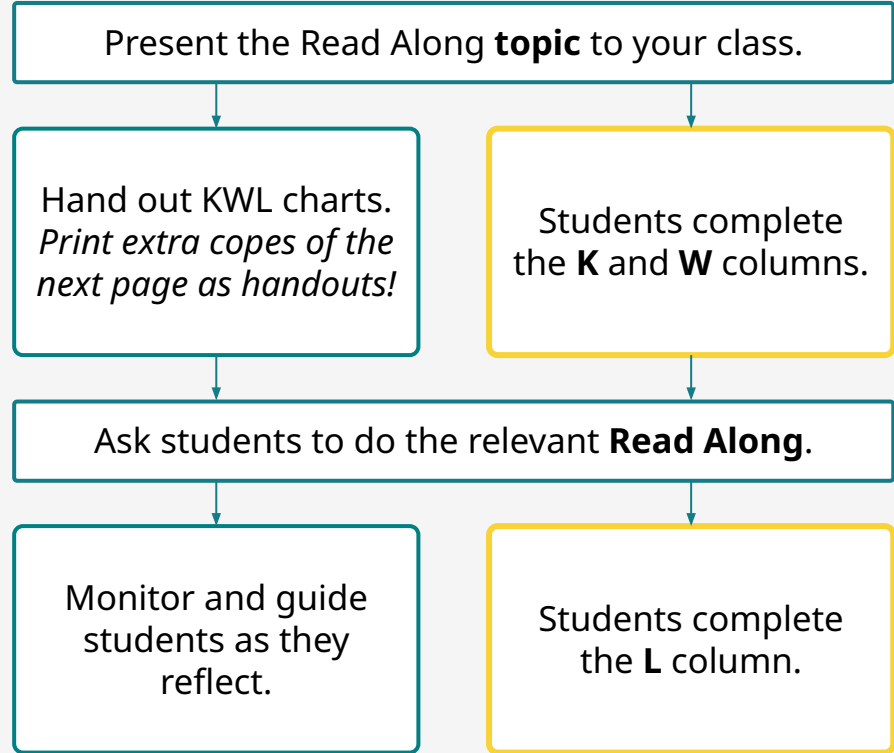
Speak Agent

Name: _____

Story Topic: _____

Date: _____

KNOW

K

WANT TO KNOW

W

LEARNED

L

Using KWL with Read Alongs

<u>Before</u> Speak Agent (K & W):

Students write down what they **k**now or **w**ant to know.

If the topic is fractions, a student might write:

> **K** → I know fractions are parts of a whole;
> **W** → I want to know how to add different fractions.

For linear equations, a student might write:

> **K** → I know y = mx + b is a line;
> **W**→ I want to know what slope really means.

<u>After</u> Speak Agent (L):

Students record new things they **l**earned.

If the topic is fractions, a student might write:

> **L** → I learned that to add fractions, I need a common denominator.

For linear equations, a student might write:

> **L** → I learned that slope is rise over run and shows steepness.

Each One, Teach One

A peer-teaching activity where students take turns teaching a concept or problem to a classmate.

Pairs with:

Drawing Board

HOW IT WORKS:

Present a new concept in your lesson plan.

↓

Ask students to do the relevant **Drawing Board**.

↓

Match students with a partner.

↓

Monitor and invite students to share explanations with the whole class.

Students take turns explaining their drawing solution to their partner.

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The partner listens, asks questions, and teaches about their own drawing.

Drawing Board
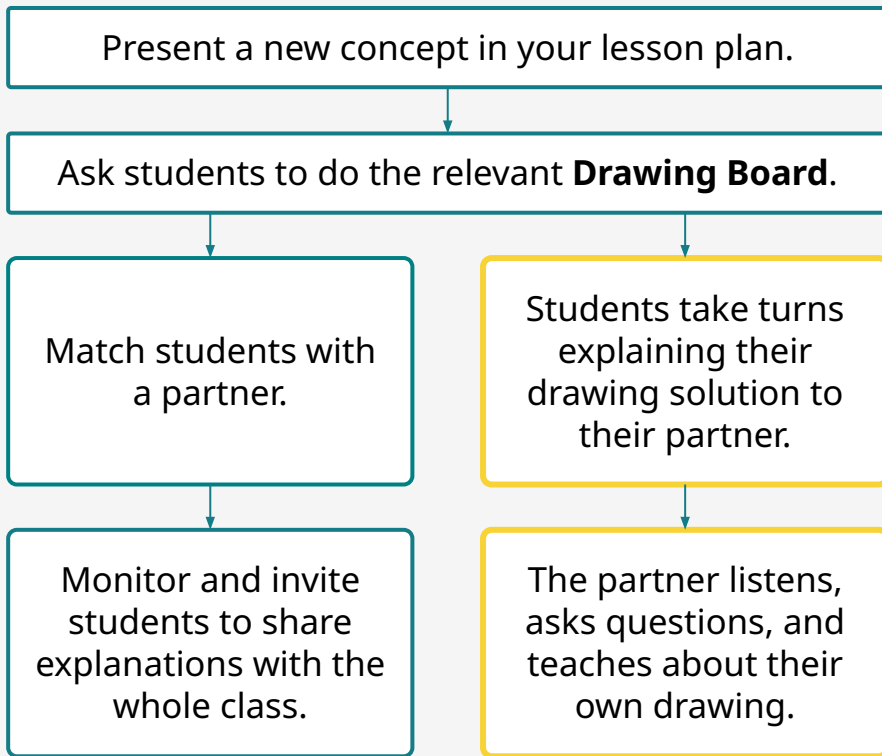
You're designing a park! Your drawing must include: two paths that never touch, two paths that cross at a square corner, and two lines that cross but do NOT form a square corner.

Draw parallel, perpendicular, and intersecting lines. Label what each one is.

- Back To Lesson
- ? Activity Help
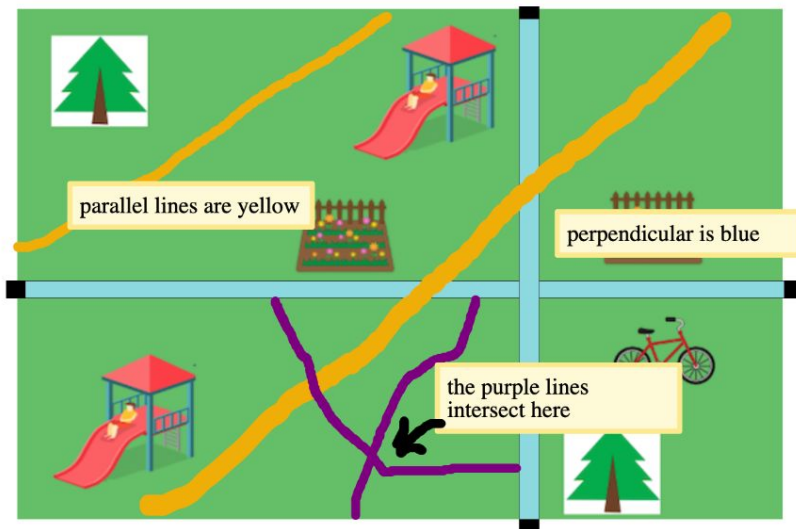- Sound: On
- Narration: Medium
- Select Language

parallel lines are yellow

perpendicular is blue

the purple lines intersect here

Students can export their drawing to a PDF, if you find that helpful.

(0)

hint (3)

Print PDF

Share With Teacher

Think-Pair-Share

A collaborative learning strategy that engages all students in thinking, talking, and listening.

Pairs with:

Word Gallery

Also works with: My Voice Questions, Vocab Lab

HOW IT WORKS:

```
Group students in pairs (or teams of max. 3)
                    ↓
Ask students to open the relevant Word Gallery.
        ↓                              ↓
Group students in           Each student picks a
teams of 2 to 3.            unique word to learn.
        ↓                              ↓
Monitor and invite          Share what you learn
students to share           with your partner!
explanations with you                  ↓
or the class.               Now switch roles.
```
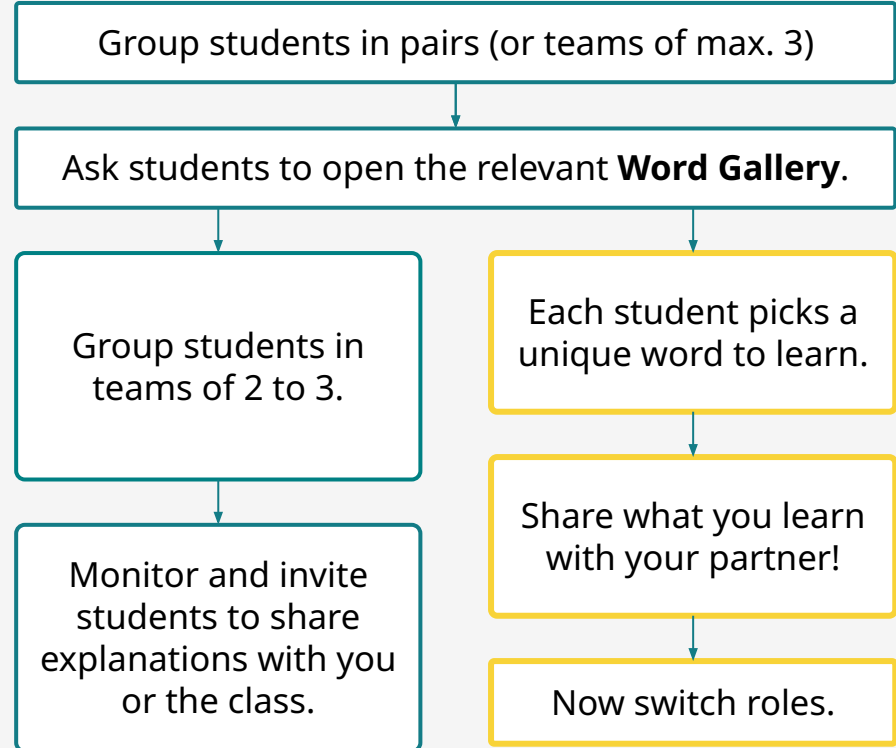
Think-Pair-Share Prompts

What should students share with each other? Here are some ideas!

- What do you think the word means?
    - Explain the meaning in your own words.
    - Or, write down the meaning.
- What's an example of the word in the real world?
    - Can you draw your example?
- What are some related words?
    - Does the word have any opposites?
    - Is it made up of more than one word, like "place value?"
    - Does it sound like another word?
    - Are there words this word often goes with? For example, digits go with numbers, or length goes with width.

Activity Reflection

An exercise where students think back on a math activity they just completed and reflect on what they learned.
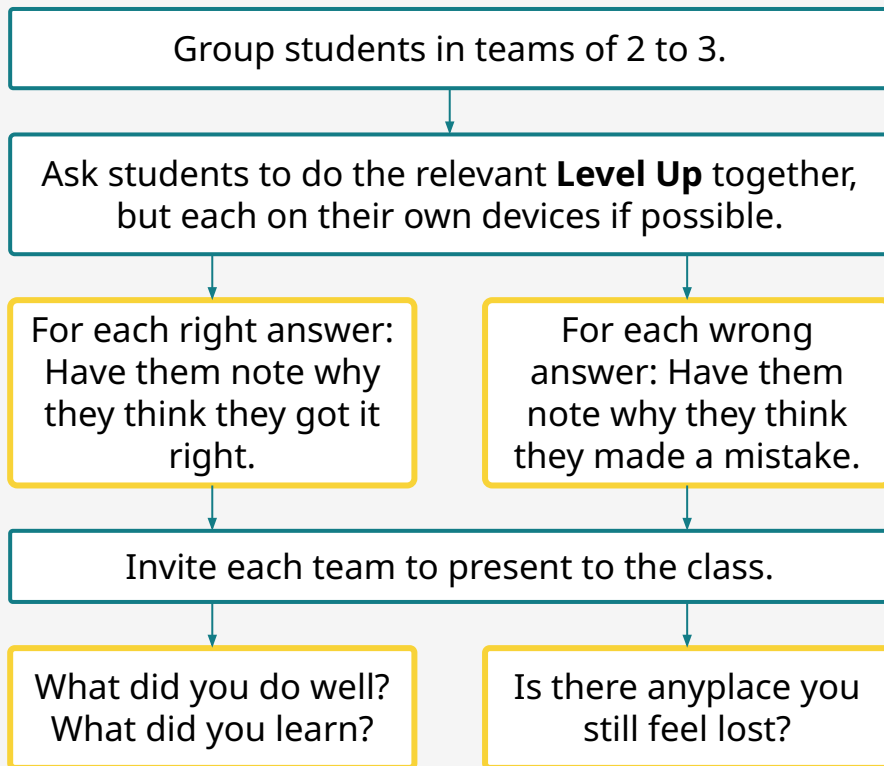
Pairs with:

Level Up

Also works with: Read Along, Diagram It

HOW IT WORKS:

Group students in teams of 2 to 3.

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Ask students to do the relevant **Level Up** together, but each on their own devices if possible.

↓

For each right answer: Have them note why they think they got it right.

For each wrong answer: Have them note why they think they made a mistake.

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Invite each team to present to the class.

↓

What did you do well? What did you learn?

Is there anyplace you still feel lost?

Level Up

Rounds

← Back To Lesson

? Activity Help

🔊 Sound: On

〰 Narration: Slow

Select Language

2. What is the rule in this number pattern: 6, 10, 14, 18? 🔊

input	pattern	output
1	+3	4
2	+3	5
3	+3	6
4	+3	7
7	+3	10

A add 4 🔊

❌ multiply 4 🔊

C subtract 4 🔊

😊 Look closely at how much each number goes up.

we said multiply instead of add. The difference between each number is always 4. If it was multiply, the number would go up.

The team should note down their error and then how they figured out the correct answer together.