Struggling to find a hands-on way to teach that the scientific method isn't always used during science?

	Procedure: I. Determine time. What keep it the 2. Drop the the height bounce? Re 3. Drop the 1	neight F what	rop the force? ch and en ne first ounce. H Repeat ne secon	tennis b Make su very trick surface low high 5 times and surfa bounce.	all each are you al. . Meas did it	h u sure nigh	Mate • Mate • You • To • 2 • S b	erials: leter of and St ennis B types urface ounce all on	or ick Balls S of es to the	
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a Contract of the Contract of	ace Surface #1									
	Surface #2									
	Vere your nact same at could la ifferent Were your rexact same What could	neasurements for surface c nave caused tl ?	ne? nem to s the -wo? hem to	Height of the Bounce						
	Why is it imp	portant to do	multiple		Trial	7 6 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	Trial	Trial	Surface 2	Trial

Don't spend any more time planning, searching, or brainstorming. Everything you need is in this easy to use download!

Teacher Directions Page

- Learning Goals
- Materials Needed
- Specific
 Directions for All
 Parts of Lesson

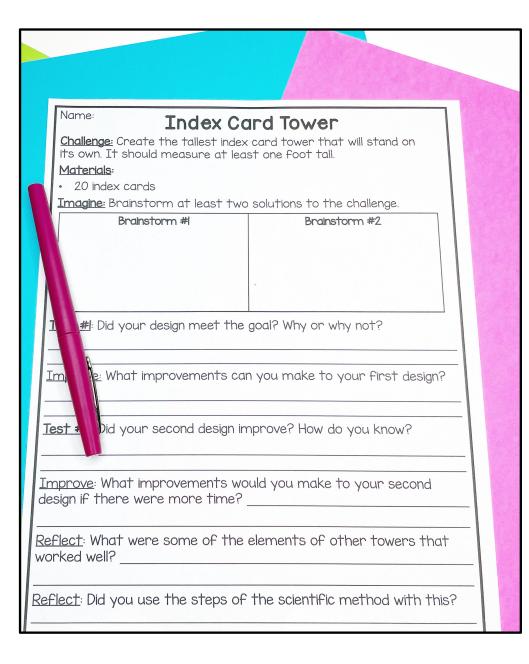
Scientific Method is Not Always Used in Science

Learning Goal: Recognize and explain that authentic scientific investigation frequently does not parallel the steps of the scientific method.

Materials Needed: Index Card Tower Recording Sheet (1 per student), 20 index cards per group, Exit Slip (6 per page)

Teacher Directions:

- 1. Remind students of the steps of the Scientific Method. Brainstorm times when scientists would not follow these exact steps.
- 2. Complete the Index Card Tower investigation. Have students draw their designs before beginning. Give each group 20 index cards. Start a timer for the first build I recommend 15-20 minutes. Pause and have students answer the first two questions on the reflection sheet. Have students take down their original towers. Give 10-15 minutes for the second tower build. After the time ends, have students answer the next questions.
- 3. Hold a class discussion on the reflection questions. Did students use the scientific method for this investigation? Why or why not? Will scientists always use the scientific method? Why or why not?
- 4. Have students complete the exit slip questions: "Why do scientists not always use the scientific method?"
- 5. Review exit slips and record students who've mastered this lesson and those who need additional practice.



Experiment

- Recording sheet walks
 through the experiment
 process with a focus on the
 scientific method NOT being
 used
- Index Card Tower
 - ✓ Lists Materials
 Needed
 - ✓ Specific Instructions
 - ✓ Perfect way to show that the scientific method steps are not always used

Quick Assessment

		Exit Slip Trac	king
Date	Extt Slip Topic	Students Who Have Shown Mastery	Students Who Need Additional Review/Practice
	Nam		
	Wh	y do scientists not always the scientific method?	suse
	_		

Use this simple exit ticket question to measure your students' learning at the end of the lesson.



BONUS: Includes a Mastery
Checklist. You can easily keep
track of students who need
extra practice and students who
are ready to move on to the
next lesson in one easy place!