

Geometry Congruence: Clarify Intended Learning

Vignette Script

Vignette Summary

This three-minute video shows a high school teacher clarifying the intended learning. She uses a Launch activity that asks students to make connections to previous learning as a strategy to clarify the intended learning.

| Vignette Script | | | |
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| Voice-Over Character | Audio | On-Screen Text | |
| Dalton | There's a lot of everyday things that are — it's going to be the same part over and over again, which means every single part is going to be congruent to each other. | | |
| Ms. Pforts | All right, so good morning, ladies and gentlemen. So today we're going to talk about high school geometry and congruence and what that looks like for us. | | |
| Ms. Pforts | When I clarify intended learning with the students, I like to explicitly make sure that they know what's the hot ticket items basically. | April Pforts 9-12th Math Teacher Mount Pleasant High School, Mount Pleasant, IA | |
| Ms. Pforts | One, 'I understand that congruent figures remain congruent through the rigid motions of translations, rotations, and reflections.' | STUDENT LEARNING GOAL I understand that congruent figures remain congruent through the rigid motions of translations, rotations, and reflections. | |
| Ms. Pforts | 'I understand that justifying my conclusions, communicating with others, comparing plausible arguments, and asking useful questions help to clarify mathematical reasoning.' | STUDENT LEARNING GOAL I understand that justifying my conclusions, communicating with others, comparing plausible arguments, and asking useful questions help to clarify mathematical reasoning. | |
| Ms. Pforts | And our third learning goal is that 'I understand that using clear and precise definitions helps to simplify and strengthen the mathematical reasoning process.' | STUDENT LEARNING GOAL I understand that using clear and precise definitions helps to simplify and strengthen the mathematical reasoning process. | |
| Ms. Pforts | The learning goals today were from the Common Core and we were talking about rigid motion to show that triangles are congruent and how to make | | |



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| | mathematical arguments. | |
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| Ms. Pforts | You do not have to write every single word down, just the bold words as we go through it. And by the end of this lesson, we want to really have a deep understanding of what those bold words mean. | |
| Ms. Pforts | 'I can use a series of rigid motions to show that two triangles are congruent' — so "series." | STUDENT SUCCESS CRITERIA I can use a series of rigid motions to show that two triangles are congruent. |
| Ms. Pforts | 'I can justify that there is more than one series. So now, we're going to build on what a series is and can there be more than one.' | STUDENT SUCCESS CRITERIA I can justify that there is more than one series of rigid motions to show two triangles congruence. |
| Ms. Pforts | Our third success criteria today: I can define congruence in terms of rigid motion to construct arguments explaining why two triangles are congruent. | STUDENT SUCCESS CRITERIA I can define congruence in terms of rigid motion to construct arguments explaining why two triangles are congruent. |
| Ms. Pforts | I wanted them to focus on really a series and rigid motion, how are they going to argue that and how does that look in the real world, and the properties of rigid motion. | |
| Ali | Having the success criteria and the learning goals just kind of — it clarifies, "OK, this is what I need to do." And it does add pressure but it's kind of — it's good to know what you're doing. | Ali 11th Grade Student Mount Pleasant High School, Mount Pleasant, IA |
| Ms. Pforts | Where might we find congruent figures in our practical world? Think about everyday objects. So let's just take a couple of minutes in your pairs and then in your small groups. So brainstorm with each other. | |
| Student | The manufacturing aspect of things like how a press would stamp everything exactly the same. | |
| Ms. Pforts | What might be some other congruent shapes that are around us? Specifically, look around. | |
| Student | The cabinets. | |
| Ms. Pforts | The cabinets. Honeycomb. | |
| Student | Like in — like the octagon or the hexagon. | |



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| Ms. Pforts | Why would that need to be the same for the bees? | |
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| Dalton | Well, it'll fall apart if they don't all fit together. | |
| Dalton | It's really nice for her to put in that real-world thing because if you're walking down the street, you're really not going to think, "Oh, those are congruent." But when she points it out and then we go searching, like one thing we used was the Epcot ball at Disney World and it's all made of triangles, like little triangles. But then the more you put it together, it makes bigger triangles and you see the reflections and the rotations. And it makes everything, like, a lot more interesting. | Dalton 10th Grade Student Mountain Pleasant High School, Mount Pleasant, IA |
| Ms. Pforts | When the students identify congruent shapes around them, I felt that they understood that and could then apply that to a more formal definition of rigid motion. | |
| Ms. Pforts | So previously, we've learned about rigid motions. What are some rigid motions that you've learned about? Dale? | |
| Dale | Translation. | |
| Ms. Pforts | Translation. Yes. | |
| Student | Rotation. | |
| Ms. Pforts | Rotation. What's another way that we could describe rotation? Adam? | |
| Adam | As a turn. | |
| Ms. Pforts | As a turn. | |
| Ms. Pforts | I want them to be thinkers. I want them to be problem-solvers and not just contrived problem-solvers but solvers of problems that we don't know the answers to. | |
| Ms. Pforts | Today, we will be exploring how we can use rigid motion to prove that two triangles are congruent. So we're going to use that reflection, that rotation, that translation to prove that two triangles are congruent, same size, same shape. | |
| | | For more information about clarifying the intended learning for this task, go to the Toolkit section of this module. |