Worksheet to Accompany Videos

Part 1: Watch the Talk Moves for Geographical Data video Part 1.

First watch from [00:00] to [01:59] and answer the questions below with the help of Extract 1:

What Talk Moves are featured here. Fill in the Talk Moves Column in Extract 1. What is the purpose of using these Talk Moves according to the teacher?

Extract 1:

Speaker	Classroom Talk	Talk Moves
T:	Okay class, **let's identify what this graph is about.**	
S1:	Urban and rural population of the world.	
T:	**Is that all?**	
S2:	And the total world population.	
T:	**Which part of the graph shows you these?**	
S2:	The legend over there.	
T:	Yes, the legend here. So the beige bars represent…?	
S2:	The beige bars represent the total world population.	
T:	Mmm hmm, what else?	
S2:	The blue line represents the urban population, whereas the red line represents the rural population.	
T:	Good. **Are we satisfied with this description? Is there more?**	
S3:	Yes, the years. It's from 1950 to 2030.	
T:	**Where do you see this data?**	
S3:	The x-axis.	
T:	**What else do you notice about the x-axis?**	
S4:	Projected data.	
T:	Oh you mean the grey area here? Anyone else knows what is projected data?	
S4:	In the future!	
T:	Good, so we have data that has happened, and data that is projected or is estimated.	
	Can someone tell me the years for these 2 types of data?	
S5:	1950 to 2015 is data that has happened. 2015 to 2030 is estimated.	
T:	**Which part of the graph have we not yet discussed…?**	

Second, watch from [02:00] to [03:20] and answer the questions below with the help of Extract 2:

What Talk Moves are featured here? Fill in the Talk Move column in Extract 2.
Why did the teacher say "Oh dear, am I telling them where to look?"
Why did the teacher say "And now I am analysing and summarizing for them."
How would you do it differently to shift the learning autonomy to students?

Extract 2:

Speaker	Classroom Talk	Talk Moves
T:	What do you notice about the changes in urban population?	
S6:	Increasing.	
T:	Ok, are you able to tell me what is the urban population in the year 1950?	
S6:	0.8 billion.	
T:	Ok, so 1950, 0.8 billion. [T writes: 1950 – 0.8 billion] And how about in the year 2030?	
S6:	5 billion.	
T:	Okay, so 2030, 5 billion. [T writes: 2030 – 5 billion]	
T:	So the urban population was 0.8 billion in 1950 and it may reach 5 billion by the end of 2030. So that is why Favian said that it is increasing. [T draws an upward arrow]	

Third, watch from [03:20] to the end of the video and answer the questions below with the help of Extract 3:

What Talk Moves are featured here? Fill in the Talk Move column in Extract 3.
Compare Extracts 2 and 3. In what way has the teacher improved her questioning? Highlight the questions that the teacher asked which you think contributed to this improvement.

Extract 3:

Speaker	Classroom Talk	Talk Moves
T:	**So what do you notice about the changes in urban population?**	
S6:	Increasing.	
T:	**Which data points would you choose to show this?**	
S6:	Erm 1950…	
T:	Ok, is that your start point? Tell me about urban population at that point.	
S6:	1950 is 0.8 billon.	
T:	[T writes: 1950 – 0.8 billion] And **what other data point would you choose to demonstrate that urban population has increased?**	
S6:	1990…	
T:	**Why did you choose that data point?**	
S6:	I don't know… It is right in the middle?	
T:	If we want to show that the urban population is increasing, **do you agree that 1990 is a good year to select?**	
S2:	No, because it's not an important point. It is always going up.	
T:	**So what would be the other point to choose?**	
S2:	2030 and 5 billion.	
T:	Okay 2020, 5 billion. [T writes: 2030 – 5 billion] And that will be your end point and it's projected. [T writes: (projected)] And increasing.	
T:	Ok, Phone, **can you put these together to describe the changes in urban population?** [T points at writing on the board]	
S3:	The urban population increased between 1950 and 2030. In 1950, the urban population was 0.8 billion…	
T:	**Would anyone want to continue from there?**	
S1:	In 2030, the projected urban population is 5 billion.	

Part 2: Watch the Talk Moves for Geographical Data video Part 2.

First, watch from [00:00] to [02:09] and answer the questions below with the help of Extract 4:

Why do you think S3 had trouble answering the teacher's question "Could you put it in a more geographical way"?
How do you think the teacher can do better?

Extract 4:

Speaker	Classroom Talk	Talk Moves
T:	**Can someone describe the relationship between the location and rainfall depicted in our map?**	
S1:	Nearer to the sea, higher the rainfall.	
T:	**Is there anything you want to add on?**	
S2:	Astoria is closer to the sea, so it has more rainfall, while Montana is further from the sea, so it has lower rainfall.	
T:	**Okay, can you provide an explanation for this relationship?**	
S3:	Because some places are nearer to the sea. When you are near the sea, the wind can blow the parts, then… When it's further away from the sea, the wind from the sea will have no effect.	
T:	Okay, so if further away from the sea, the wind has no effect, hmm... **Jovan, could you help to put in a more geographical way?**	
S3:	Urghh… what do you want me to answer, 'cher? Do you want me to answer from the textbook?	

Second, watch from [02:09] to [04:24] and answer the questions below with the help of Extract 5:

What Talk Moves are featured here? Fill in the Talk Move column in Extract 5.
What did the teacher do in Extract 5 that is different from Extract 4? Do you think this is an improvement? Why?

Extract 5:

Speaker	Classroom Talk	Talk Moves
S3:	Astoria is closer to the sea, so it has more rainfall, while Montana is further from the sea, so it has lower rainfall.	
T:	Alright, your classmates have noticed that Astoria is near to the sea. [T draws: outline of coast, labels: sea] Okay, and the sea has the potential to actually affect rainfall. **Does anyone notice any other things on the map? Any other features on the map that would affect rainfall?**	
S4:	Mountain?	
T:	Mountain, okay. [T draws: mountain] So you said one mountain? **Can you be a bit more specific?**	
S4:	Rocky Mountains.	
T:	[T labels: Rocky Mountains] Rocky Mountains. Okay, Rocky Mountains. **Ok, where are the Rocky Mountains then?**	
S5:	Between the cities... Like separate them.	
T:	Okay, you mentioned "separate the cities". **Where are they located?**	
S5:	Portland and Astoria at this side of the mountain. Helena and Billings at the other side.	
T:	Okay, you mentioned Portland and Astoria. And then the other side… [T labels: Portland and Astoria (at the side closer to the sea), Helena and Billings (at the other side of the mountain)] Okay, Wei Qian and Jun Yang had actually talked about the idea of the locations on the two sides of the Mountains.	
	Can someone explain the relationship between the location and the amount of rainfall?	
S6:	Because the mountain has two sides, right, so the air is forced up at one side.	
T:	Okay, so forced up by one side… [T draws: upward arrow (from the sea up to the Rocky Mountains)] Okay. So it's forced up by one side. **Can actually anyone elaborate or continue from this explanation?**	
S1:	The air has a lot of water vapour, because it's blown from the sea.	
S2:	Then it reaches the mountains and it has to go up the top of the mountain and then it rains.	
T:	**Okay, is this explanation complete?** But just think, why does it rain? What happens to this air that is being forced up to rise here [T points at the upward arrow]?	
S3:	It will cool and then clouds will form… condense is it?	
T:	Okay yes, as the air rises, it will be forced up, cools and then condenses. So we have condensation. [T writes: condensation (on top of the Rocky Mountains)]	

Third, watch from [04:27] to the end of the video and answer the questions below with the help of Extract 6:

What Talk Moves are featured here? Fill in the Talk Move column in Extract 6.
Which of these Talk Moves do you think are important? Why do you say so?

Extract 6:

Speaker	Classroom Talk	Talk Moves
T:	Okay good. [T points at the sketch on the board] Can we try and put this in a more geographical way. I need you to first look at this diagram in your textbook. **Can you recall what do we call this phenomenon?**	
S1:	Relief rain.	
T:	Okay, so Shasheer mentioned relief rain [T labels: relief rain (near the top of Rocky Mountains)]. Okay, **can you recall how relief rain is formed?**	
S1:	The mountain and then two sides.	
T:	Good. **Can someone else now tell me what do geographers call these two sides?**	
S2:	Windward side and leeward side.	
T:	Okay, so windward side and leeward… [T writes: *windward side* & *leeward side* on the sketch] And you continue?	
S2:	Because the wind blows the water vapour from the sea to the mountain…	
T:	Okay, so sorry, Dhivya. Let's work on this first. **What do we call this kind of wind?**	
S3:	Prevailing wind.	
T:	[T labels: prevailing wind (near the upward arrow)] **Okay, any other geographical terms that we can use to explain what Dhivya has said?**	
S6:	The prevailing wind carries warm, moist air.	
T:	Okay good, erm okay so we can actually describe this water vapour as warm, moist air, right…	
T:	Ok so we actually now have the following terms. [T points to the terms] Relief rain, sea, prevailing wind, windward side, leeward side... So can we use these words on the board to explain why some locations on the map, that we mentioned earlier, experience more rainfall than the others?	

Part 3: Watch the Talk Moves for Geographical Data video Part 3.

First, watch from [00:00] to [02:34] and answer the question below with the help of Extract 7:

What was the teacher's concern? How do you think she can improve?

Extract 7:

Speaker	Classroom Talk	Talk Moves
T:	**Ok, can anyone summarise what we have just discussed?**	
S1:	The mean annual temperature increased by 1.1 °C from 1972 to 2014.	
T:	**Alright, so that's the first half of what we've discussed. Can anyone summarise the second half?**	
S2:	The total annual rainfall increased by 535mm from 1980 to 2014.	
T:	Okay, so we noticed that both mean annual temperature and total annual rainfall have increased. **Now what are the impacts of having higher temperatures in tropical regions?**	
S3:	Heatwave.	
T:	There is a possibility of heatwave. Alright so when temperature increases, there is a possibility of heatwave. [T writes: Temp ↑] **So when there's a heatwave, what is affected?**	
S3:	People.	
T:	People, right so people are affected. **So what will happen to people?**	
S4:	Their body is very hot.	
T:	Alright, so their bodies are very hot. [T writes: body very hot] Alright.	
S5:	They fall sick.	
T:	Okay. [T writes: fall sick]	
S6:	They might even die.	
T:	Yes. [T writes: die]	
T:	Okay, so just now Christine you mentioned that their bodies are very hot, can you elaborate a bit further? What will their body temperatures be like…?	
S4:	Their temperature will be high. So their body temperature will be high.	
T:	Yes alright, so their body temperatures are high. [T writes: -> body temp is high] Alright, so when their body temperatures are high, they actually fall sick and this means that their health is affected [T writes: -> health affected]. Alright, and when their health is affected, they might die, and this may lead to…	
S6:	Death.	
T:	Yes. [T writes: -> death]	
S6:	[S6 copies from the board] …this may lead to death…	

Second, watch from [02:35] to the end of the video and answer the questions below with the help of Extract 8:

Identify how the teacher's questioning in Extract 8 is different from Extract 7. Do you think this led to an improvement?
How did the teacher try to help students improve their written work?

Extract 8:

Speaker	Classroom Talk	Talk Moves
T:	Alright, so people's health is affected, and **what might happen next?**	
S1:	They see doctors.	
T:	Okay yes, they should definitely see doctors, **but if more people go to see doctors, what will happen?**	
S2:	Less people are working.	
T:	Okay very good, so less people are working. [T writes: less people working] **Can you think of a better way to phrase this?**	
S2:	Less people are able to work?	
T:	**Can you rephrase that further?**	
S3:	Oh, lack manpower!	
T:	Yes alright, so there is a lack of manpower. [T writes: -> lack of manpower] **But what do we need manpower for?**	
S3:	For work?	
T:	Alright yes, so for work. Okay, we seem to be going round in circles now. We need manpower to work in factories and other industries. And **if they cannot work, then what will happen to these industries?**	
S4:	Make less things.	
T:	Yes alright, so they make less things. [T writes: make less things] **Or we can say…?**	
S5:	Produce, produce…	
T:	Yes, alright! So produce less!	
S5:	Yah, less production.	
T:	Yes alright, so in this case, when industries are affected, and their production falls. [T writes: -> production falls] **So what kind of impact do we classify this under?**	
S6:	Economic impact.	

T:	Ok. [T inserts: Λ economic]	
T:	Now, I want you to put all these ideas together, and answer the question. Okay, and later I'll get some of you to share your answers with the class…	

Part 4

Overall Reflection Questions:

Did you learn anything that might help you improve your practice as a teacher?
Do you think that Talk Moves in Productive Classroom Talk are an example of Powerful Pedagogy? Why do you say so?