Phantom pain Video 1. Watch the whole report and answer these questions

How many parts are there in the video?

2 main parts

What are the main themes?

Phantom pain and virtual reality as a device for easing pain

What are the similarities between the 2 parts?

They are both TV reports on phantom pain and virtual reality What are the discrepancies between the 2 parts (concerning the patient)

In the 1st report, he is called Peter King and they say he was amputated 20 years ago, in the 2nd report, he is called Peter Smith and they say he was amputated 14 years ago

Who are the characters common to both parts? Peter King/Smith (patient with an amputated arm), Craig Murray (psychologist)

Information	1st report	2 nd report
Definition of phantom pain		
Device for easing pain		
Reasons for feeling pain in a missing limb		
Information about Peter		

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	
Device for easing pain		
Reasons for feeling pain in a missing limb		
Information about Peter		

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	
Device for easing pain	Amazing new system developed at Manchester University	
Reasons for feeling pain in a missing limb		
Information about Peter		

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	
Device for easing pain	Amazing new system developed at Manchester University	
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	
Information about Peter		

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	
Device for easing pain	Amazing new system developed at Manchester University	
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	
Information about Peter	Peter King from Cheshire has not slept properly for over 20 years, the pain is too much. Somebody dived on him in a swimming-pool and shattered his collarbone	

Information	1st report	2 nd report
Peter's pain		
How does virtual reality work?		
Does virtual reality work?		

Information	1st report	2 nd report
Peter's pain	He feels as if he'd like to go and cut it off again. That's how bad the pain is. On a pain scale from 0 to ten, his pain is about 7	
How does virtual reality work?		
Does virtual reality work?		

Information	1st report	2 nd report
Peter's pain	He feels as if he'd like to go and cut it off again. That's how bad the pain is. On a pain scale from 0 to ten, his pain is about 7	
How does virtual reality work?	Peter's mind is being distracted. He thinks he's moving the arm he doesn't have.	
Does virtual reality work?		

Information	1st report	2 nd report
Peter's pain	He feels as if he'd like to go and cut it off again. That's how bad the pain is. On a pain scale from 0 to ten, his pain is about 7	
How does virtual reality work?	Peter's mind is being distracted. He thinks he's moving the arm he doesn't have.	
Does virtual reality work?	The exercise relieves the pressure on his nerve endings. Peter can feel his pain decreasing, and down to, sort of, 4.5 (four and a half) to 5 after 2 or 3 minutes	

Information	1st report	2 nd report
Can virtual reality be used in other pathologies?		
How much does it cost?		
Where do they want to install virtual reality?		

Information	1st report	2 nd report
Can virtual reality be used in other pathologies?	People who have migraine: people with other disabilities such as strokes, or that experience extreme pain in their limbs as well.	
How much does it cost?		
Where do they want to install virtual reality?		

Information	1st report	2 nd report
Can virtual reality be used in other pathologies?	People who have migraine: people with other disabilities such as strokes, or that experience extreme pain in their limbs as well.	
How much does it cost?	The whole system costs around 15,000 pounds	
Where do they want to install virtual reality?		

Information	1st report	2 nd report
Can virtual reality be used in other pathologies?	People who have migraine: people with other disabilities such as strokes, or that experience extreme pain in their limbs as well.	
How much does it cost?	The whole system costs around 15,000 pounds	
Where do they want to install virtual reality?	in Disablement Service s centers	

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	
Device for easing pain	Amazing new system developed at Manchester University	
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	
Information about Peter	Peter King from Cheshire has not slept properly for over 20 years, the pain is too much. Somebody dived on him in a swimming-pool and shattered his collarbone	

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	Amputated people suffer from crippling pain
Device for easing pain	Amazing new system developed at Manchester University	
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	
Information about Peter	Peter King from Cheshire has not slept properly for over 20 years, the pain is too much. Somebody dived on him in a swimming-pool and shattered his collarbone	

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	Amputated people suffer from crippling pain
Device for easing pain	Amazing new system developed at Manchester University	Scientists at Manchester University use virtual reality to trick patients' brain to stop the pain
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	
Information about Peter	Peter King from Cheshire has not slept properly for over 20 years, the pain is too much. Somebody dived on him in a swimming-pool and shattered his collarbone	

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	Amputated people suffer from crippling pain
Device for easing pain	Amazing new system developed at Manchester University	Scientists at Manchester University use virtual reality to trick patients' brain to stop the pain
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	Amputated people's brain believes that the limb is still attached.
Information about Peter	Peter King from Cheshire has not slept properly for over 20 years, the pain is too much. Somebody dived on him in a swimming-pool and shattered his collarbone	

Information	1st report	2 nd report
Definition of phantom pain	Pain from an amputated limb	Amputated people suffer from crippling pain
Device for easing pain	Amazing new system developed at Manchester University	Scientists at Manchester University use virtual reality to trick patients' brain to stop the pain
Reasons for feeling pain in a missing limb	the pain from the nerve endings makes it feel like the limb is still there	Amputated people's brain believes that the limb is still attached.
Information about Peter	Peter King from Cheshire has not slept properly for over 20 years, the pain is too much. Somebody dived on him in a swimming-pool and shattered his collarbone	It's 14 years since Peter Smith's arm was amputated

Information	1st report	2 nd report
Peter's pain	He feels as if he'd like to go and cut it off again. That's how bad the pain is. On a pain scale from 0 to ten, his pain is about 7	
How does virtual reality work?	Peter's mind is being distracted. He thinks he's moving the arm he doesn't have.	

Information	1st report	2 nd report
Peter's pain	He feels as if he'd like to go and cut it off again. That's how bad the pain is. On a pain scale from 0 to ten, his pain is about 7	He feels like he still has a forearm, and a wrist, which try to move, and his wrist feels as if it's got a strap really tight around it that causes his fingers to swell.
How does virtual reality work?	Peter's mind is being distracted. He thinks he's moving the arm he doesn't have.	

Information	1st report	2 nd report
Peter's pain	He feels as if he'd like to go and cut it off again. That's how bad the pain is. On a pain scale from 0 to ten, his pain is about 7	He feels like he still has a forearm, and a wrist, which try to move, and his wrist feels as if it's got a strap really tight around it that causes his fingers to swell.
How does virtual reality work?	Peter's mind is being distracted. He thinks he's moving the arm he doesn't have.	You put on a set of glasses and you create a virtual limb that amputees cannot only <i>see</i> , but can also <i>move</i> They track the position of the remaining physical limb and mirror the movement of that onto the virtual limb. They try to induce sensations of movements

Information	1st report	2 nd report
Does virtual reality work?	The exercise relieves the pressure on his nerve endings. Peter can feel his pain decreasing, and down to, sort of, 4.5 (four and a half) to 5 after 2 or 3 minutes	
Can virtual reality be used in other pathologies?	People who have migraine: people with other disabilities such as strokes, or that experience extreme pain in their limbs as well	
How much does it cost?	The whole system costs around 15,000 pounds	
Where do they want to install virtual reality?	in Disablement Service s centers	

Information	1st report	2 nd report
Does virtual reality work?	The exercise relieves the pressure on his nerve endings. Peter can feel his pain decreasing, and down to, sort of, 4.5 (four and a half) to 5 after 2 or 3 minutes	This might be a <i>virtual</i> treatment; the results are <i>clearly</i> very real The results are astounding.
Can virtual reality be used in other pathologies?	People who have migraine: people with other disabilities such as strokes, or that experience extreme pain in their limbs as well	
How much does it cost?	The whole system costs around 15,000 pounds	
Where do they want to install virtual reality?	in Disablement Service s centers	

Information	1st report	2 nd report
Does virtual reality work?	The exercise relieves the pressure on his nerve endings. Peter can feel his pain decreasing, and down to, sort of, 4.5 (four and a half) to 5 after 2 or 3 minutes	This might be a <i>virtual</i> treatment; the results are <i>clearly</i> very real The results are astounding.
Can virtual reality be used in other pathologies?	People who have migraine: people with other disabilities such as strokes, or that experience extreme pain in their limbs as well	No information
How much does it cost?	The whole system costs around 15,000 pounds	No information
Where do they want to install virtual reality?	in Disablement Service s centers	No information

Reading comprehension

I. Read the text and match the titles below and the different parts of the text

 1st part: from line _____to line ____:

 2nd part: from l. _____to ____:

 3rd part from l. ____to ____:

 4th part from l. ____to ____:

applications impairment phantom limb pain the science of proprioception

Reading comprehension

I. Read the text and match the titles below and the different parts of the text

1st part: from line 1 to line 14: the science of proprioception

2nd part: from 1. 15 to 24: applications

3rd part from I. 25 to 43: impairment

4th part from I. 44 to 57: phantom limb pain

II. Describe the loop system of proprioception Step 1: Step 2: Step 3: Step 4: General sentence:

- II. Describe the loop system of proprioception
- Step 1: decision of making a movement
- Step 2: motor cortex sends information to muscles
- Step 3: body's sensors send back signal to motor cortex
- Step 4: updated information from motor cortex to improve movement
- General sentence: Information in and out and so on...

III. List examples of what cannot be done without the sense of proprioception

- 1. Sobriety test: touch one's nose with closed eyes
- 2. Walk in complete darkness/ walk without looking at one's feet
- 3. Paint or write without looking at one's hand
- 4. Drive without looking at the foot pedals
- 5. Dance without looking at one's feet

IV. Decide if the following statements are True or False or if there is No Information in the text

1. Proprioceptive sensations can be altered by drugs (T, line 15: alcohol, but also (NI) by some medical treatments such as an overdose of vitamin B6, or some cytotoxic factors such as chemotherapy) 2. Temporary loss of proprioception is a clinical sign of the onset of paralysis (F, lines 30-31, it is quite common during adolescence) 3. Habituation is used to ignore any continual stimulus (T, lines 36-38)4. Impairment of proprioception can be cured by medicine (F, lines 27-29, cannot be cured but the condition can be improved by relying on other senses such as sight or hearing) 5. Phantom limb pain is closely related with internal body image (T, lines 38-39 and 48-50) 6. People suffering from phantom limb experience one phantom sensation (F lines 39-43, they can perceive movement, pain, pressure, cold/hot, itching)

7. Phantom limb pain occurs only after an amputation

(F lines 52-58, it can also occur when the brain is disconnected from the body such as peripheral nerve injuries or spinal cord injury).

V. Match words and definitions

itching (adj.), wobble (verb), sole (noun), awareness (noun), insentient (adj.), impairment (noun), steer (verb), stiff (adj),

- 1. To guide a vessel or vehicle
- 2. Having knowledge of
- 3. To move or rotate with an uneven or rocking motion or unsteadily from side to side
- 4. Lacking ease or comfort of movement; not limber
- 5. An irritating skin sensation causing a desire to scratch
- 6. Devoid of sensation or consciousness; inanimate
- 7. The underside of the foot:
- 8. Damage that results in a reduction of strength or quality

V. Match words and definitions

itching (adj.), wobble (verb), sole (noun), awareness (noun), insentient (adj.), impairment (noun), steer (verb), stiff (adj),

1. To guide a vessel or vehicle:

steer

2. Having knowledge of:

awareness

3. To move or rotate with an uneven or rocking motion or unsteadily from side to side

wobble

4. Lacking ease or comfort of movement; not limber stiff

5. An irritating skin sensation causing a desire to scratch itching

6. Devoid of sensation or consciousness; inanimate insentient

7. The underside of the foot:

sole

8. Damage that results in a reduction of strength or quality impairment