

# Science and PSHE

## Health



*"The right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health" including "the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution."*

CRC - Article 24

Children living in poverty do not usually have a healthy start in life. They lack a good diet which has negative effects on their growth and development. They are also likely to suffer, and possibly even die, from diseases that are entirely preventable and/or treatable such as pneumonia, diarrhoea and measles.

### Physical health

Street children in particular are prone to health problems because of the unsanitary and overcrowded conditions in which they live.

They are particularly at risk from:

- Infected wounds because they are not able to keep them clean;
- Chest and respiratory infections due to dusty environments and exposure to toxic substances;
- Malaria because they sleep outside;

- Water-borne diseases such as typhoid and cholera because they usually have extremely limited access to clean water supplies. Street children often have to depend on expensive, low quality water supplied by vendors as public cleaning and washing facilities may not be accessible to them;
- Malnutrition and intestinal problems because access to fresh food is very limited and also street children don't have the knowledge or facilities to eat and prepare food properly.

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**30% of all street children registered in 2002 by one NGO in Cambodia displayed stunted growth.**<sup>1</sup>

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### Mental health

It is not only the physical health of the children that suffers. Street children are traumatised emotionally either by the reasons that took them to the streets in the first place or because of the bad experiences they have had on the streets.

### Why are street children vulnerable to STIs, HIV / AIDS and pregnancy?

Street children are at particular risk of contracting HIV/AIDS and other sexually transmitted infections because of:

- Their lack of access to, knowledge of, and ability to afford contraceptives and the negative perceptions surrounding their use;
- Their inability to negotiate safe sex (which can be further hampered by substance abuse);
- Their open-air sleeping conditions and involvement in the sex trade which exposes them to sexual abuse, violence and rape.

Early and unwanted pregnancies are also common. Many babies are born to children themselves already on the streets.

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**According to a survey in Cambodia, 40% of new cases of children working on the streets from October-December 2002 were as a result of HIV in the family.**<sup>2</sup>

**There are an estimated 6,000 street babies in Accra, Ghana.**<sup>3</sup>

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Footnotes: see page 76

**Health risks associated with substance abuse**

Many street children are involved in substance abuse in some form. They usually choose the cheapest and most widely available substances, for example inhalants like glue or petrol. Other substances include alcohol, cigarettes, marijuana, crack, amphetamines and cocaine. In different countries different types of substance abuse are more or less prevalent. The misuse of substances has many different consequences, some very serious:

- **Mental** e.g. hallucinations, depression, memory and concentration problems;
- **Physical** e.g. malnutrition, severe organ damage, infections from viruses such as HIV;
- **Social** e.g. children run the risk of exploitation and violence at the hands of drug syndicates and may be involved in drug-related crime and prostitution, which carry their own health risks.

**“If you get sick on the streets, the big people take you to the hospital but sometimes people don’t pay attention to you.”**  
Street child - Kenya<sup>4</sup>

**Street children’s access to Health care**

In spite of all these risks street children have very little access to even basic health care.

This is for a variety of reasons:

- Health care in many countries must be paid for;
- Street children are often unaware of the existence of health services, or unaware that they may be able to access some of these services without payment;
- Some fear hospitals and doctors because they risk being treated with contempt. (Some NGOs actually loan street children clean clothes so that they will be accepted for treatment and not discriminated against on the basis of their appearance);
- When they are treated, the advice given can be unrealistic e.g. being prescribed expensive medicines, being recommended detox programmes when they will soon be back on the streets and surrounded by substance abuse or even simple advice like keeping a wound clean.

**“AIDS? It’s a disease like all the others. A sister of one of my friends suffers from the disease and I saw her once but I don’t know how she got it. It seems that you can live for ten years without dying. If I am sick with malaria for example, I simply take some paracetamol or traditional medicine – the hospitals are too expensive.”**

Street child - Guinea<sup>5</sup>



The Toybox Charity

Street boy sniffing glue, Guatemala



Footnotes: see page 76

## PSHE

## What choice?



**Key learning point:** ■ Why street children may abuse substances



**Resources:** A woolly hat for 'Sipho' and a jacket for 'Jabu'.

**Instructions****1. Preparation activity**

Ask the students to read the handout and complete the comprehension questions. Tell them they will need to know the story for the next week because they will be making it into a play. (This can be set as homework or done in class). The answers to the comprehension questions should be discussed.

**2. Drama activity**

Get them into groups to act out the scenes. Each group plays out a section of the story. Make sure everyone has a role – someone should be director and organise the group. They will also need someone to narrate the story when there is no-one speaking. Give them time to practice and tell them that the whole class will run through the story. The hat and the coat will help everyone remember who is which character.

This activity can be done in stages over a number of lessons and discussion weaved throughout. It is useful for complementing more factual explorations of substance abuse and the associated health risks.

**3. Creative writing activity**

This can be used as a follow up to the drama activity. Students can be asked to write about what happened next to the street children in the story "No Turning Back." These can then be compared to what really happened in the book. (Sipho eventually, after facing many difficulties living on the streets, drops into a street children shelter and makes friends with one of the workers there. On Sipho's behalf, the worker starts to make contact with Sipho's mother and arranges a meeting between them. There is one clear rule that must be stuck to and that is that the stepfather must not be present. The story ends there).



**See also:** Section B9, 'What can we do?', (whole school activities). This can also be used as the basis for an assembly or series of assemblies about child rights or street children.

**National Curriculum**

2. Developing a healthy, safer lifestyle; b) how to keep healthy and what influences health, including the media; c) that good relationships and an appropriate balance between work, leisure and exercise can promote physical and mental health; d) basic facts and laws, including school rules, about alcohol and tobacco, illegal substances and the risks of misusing prescribed drugs; e) in a context of the importance of relationships, about human reproduction, contraception, sexually transmitted infections, HIV and high-risk behaviours including early sexual activity; f) to recognise and manage risk and make safer choices about healthy lifestyles, different environments and travel; g) to recognise when pressure from others threatens their personal safety and well-being, and to develop effective ways of resisting pressures, including knowing when and where to get help.

# What choice?

The following is taken from a story called “No Turning Back” by Beverly Naidoo. She is a South African writer who has fought hard for the rights of black people in her country. In order to write her book she did a lot of research about street children. This story is about a boy, called Siphso, who runs away from his family because of his violent stepfather.

## Part One

Siphso shivered, pulled his woollen cap down lower and clasped his arms around him. It was cold. He should have put on two jumpers. But he hadn't really been thinking clearly for the last few days. Ever since the last beating he didn't know whether to forgive Ma or not. If she didn't want him nearly killed, why did she complain so much about him to his stepfather? She knew he had a terrible temper. And all because Siphso had come in late. He had explained it was an accident... (p.3)

'Here,' someone said. 'Take some. You'll feel nice. With *iglu* (glue) you won't be cold, you won't be hungry.' Siphso put out his hand to refuse. 'I don't like it,' he said quickly.

It was a lie. He had never tried it. When the glue-pusher had been expelled from his school his mother had made him promise her he would never use the stuff. By some good luck his stepfather didn't hear about the incident...

Joseph withdrew the bottle. A thin, wet trickle running down from his nose glistened in the firelight, until he roughly swept his sleeve across his mouth. After inhaling from the bottle again, he looked at Siphso with half open eyes.

'It's OK,' he said, pausing to cough as if trying to clear his throat. But me, I'm having a good time. I have a nice, nice garden with lots of flowers. It's sunny...and hot...and I can sleep for the whole day.

Tumbling over sideways, Joseph curled himself up and in an instant seemed to have fallen asleep. Siphso looked into the shadows, examining Joseph's 'garden'. The ground was rough and covered with tall grass except where it had been cleared. (p. 32-33)

With the fire dying down, Siphso felt the cold night air seeping in. However tightly he folded his arms and squeezed his legs together, the cold sneaked into him. When Jabu passed him his cigarette, Siphso took a puff and for a couple of seconds enjoyed the warm smoke swirling around inside his head. He was pleased with himself that he didn't cough. Shutting his eyes for a moment he felt how heavy they were, but could he sleep when he was so cold? And if he was feeling this cold now, how did *malunde* (Zulu language for street children) manage right in the middle of winter? (p. 34-35)

## Part Two

Siphso lay near the edge of the cardboard, his head resting on Jabu's shoulder and his body curled up against him. Except for Joseph, who was still lying fast asleep by himself, the gang lay closely against each other... Before long the chatting had stopped. Listening to the sounds of breathing, Siphso wondered if he was the only one still awake. The cold clutched at his toes and back, wherever it could get hold of him. Was it possible that Joseph really didn't feel the cold because of the *iglu*? Was that why Matthew and Thabo had been sniffing it too? Matthew lay close to him now. If he stretched out his hand he could touch him and find if he was still awake. He could ask to try just one sniff to see if it worked...But what would Ma say if she knew?

Lying amongst the small heap of *malunde* on a plot of open ground, with nothing between himself and the wide black night sky, Siphso was suddenly overcome with the thought that Ma wouldn't know. He wasn't going to see her again. He had run away. He had no family any more. The tears began trickling down his face before he could stop them. Wiping them away with his sleeve, he held his breath tightly to stop any sobs. He didn't want anyone to see or hear.

But someone did know. Someone was shuffling up to him and then pushing something into his hands in the darkness. Siphso jerked himself up and Jabu groaned softly in his sleep.

'Quiet, man! It's only me!...'

It was Joseph. The thing pushed into Siphso's hands was the bottle of *iglu*.

'The first night is always bad. Me, I was only eight and I was crying all night because my Ma, she didn't want me any more. She said the social worker must take me away. But I ran far so they couldn't find me. Then a boy at Park Station gave me *iglu* to help me sleep'.

Joseph settled himself down next to Siphso. Without stopping to think any more, Siphso put the bottle up to his nose and took a couple of sharp, deep breaths.

'Take some more, man!' whispered Joseph.

Siphso sniffed again, until suddenly his head suddenly felt quite light, almost dizzy. He didn't like the feeling but lay down, resting his head again on Jabu's shoulder. With Joseph now on the other side of him, he felt warmer. It was good being close to somebody else. Joseph's mother hadn't wanted her son and his own Ma didn't care about him

anymore. But now he was remembering how good it used to feel when as a very small boy he had slept alongside his grandmother. Her bed had always been so warm. Well now he was little boy once again with someone caring for him and he and Gogo (grandmother) were together in a warm place, floating, floating... (p. 36)

### Part Three

Although the sun was up, the hard earth was still cold beneath the thin cardboard and Siphos whole body was stiff. No-one spoke much as they prepared themselves for the new day, slowly stretching their limbs and crossing to another corner of the plot where a small bush served as a toilet. Boys sat smoking their stompies (cigarette stumps) waiting for the sun to sink into them. Siphos rested his elbows on his knees and his head on his hands. The night before his head had felt so light; now it felt terribly heavy. Was it the effects of *iglu*? Surely not. He had only had a little. He must be getting a cold. If he had been at home with his Ma would have taken a few drops of oil from her special bottle and rubbed it on his chest...He closed his eyes, trying to shut out the picture. He was aware that Joseph was half sitting, half lying, also holding his head in one of his hands. Was he feeling bad too, or was he just trying to remember his dream garden? (p.38)

On his second day Joseph told him where he could buy some glue for himself. For a couple of days he resisted, remembering the terrible way his head had ached...But when he couldn't get to sleep at night and lay awake shivering, he was tempted. He tried to imagine he was floating away in a warm bed, but it was no good. On the fourth night, the wind was even sharper, making the fire struggle to keep alight. Siphos tapped Joseph urgently on the arm as they huddled down on the cardboard preparing to sleep.

'Please, give me *iglu*. I'll get more for you tomorrow,' he promised.

In his pocket he had a few small coins he had begun to save for the little wooden rhino. He would use those and the money he got at Checkers (a brand name for supermarket)

in the morning.

This time he didn't even stop to think of Ma's words before bringing Joseph's bottle up to his nose. His eye lids closed and everything around him in the *pozzie* (hideout) including the other boys and the biting night wind – began to fade away as he sniffed in the fumes. (p.41)

### Part Four

It was Jabu who stopped him from going into the shoe-repair shop the next morning. 'My friend died from this stuff, Jabu told him sharply. We found the bag on his head. We took him to the hospital but he was already finished'.

Overhearing Jabus story, Joseph dismissed it roughly. 'Your friend was stupid. You must use a bottle, not a bag.'

Siphos saw the anger flash across Jabus eyes. For a moment it seemed as if he might hit out at Joseph. But he lashed out with words instead.

'Hayi, *Bra* (brother) Joseph! It's you that's stupid! *Iglue* is making you sick and you can't even see. Did you forget about Jeff?'

Joseph sucked in his cheeks as if he were thinking of what to say. Then folding his arms, he shifted his gaze upwards, as if into space. He remained silent as Jabu told Siphos about a boy from another gang who had died with his head in a dustbin while looking for something to cool his throat. Word had gone round afterwards that Jeff had pneumonia because his lungs were damaged from *iglu*.

Jabu spoke so forcefully that it took Siphos by surprise. 'If you owe him, give him money, Siphos. Don't buy *iglu* yourself it's no good!'

'But it helps me sleep when I'm cold'...

'Give him his money and let's go,' said Jabu.

It was test and Siphos was right in the middle of it. He hated tests. He never knew the right answer. Putting his hand in his pocket he pulled out all his coins.

'Take this, *buti* (brother).'

 (p.41- 43)

### Questions about the extracts from the story:

1. Why did Siphos start to take some glue?
2. Who encouraged him to take it and why?
3. Who discouraged him from taking it and why?
4. Why did Siphos go to the shoe-repair shop?
5. What are some of the side effects from taking glue described in the story?
6. What does Siphos decide to do in the end?

# Health consequences



**Key learning point:** The health consequences for street children of:

- Overcrowded and unsanitary living conditions;
- Poor diet and low levels of hygiene in cooking;
- Unprotected sex and substance abuse.



## Instructions

These can be used as good introductory or revision activities as they touch on many different areas of the curriculum. Use the video/DVD clips recommended below. Ask the students to write down as many health risks as they see for each clip. Use scrap paper for making notes and then ask them to write up neatly at the end onto the handout. Encourage students to think of as many consequences as they can and even to think of the consequences of the consequences as shown in following guidance notes.

### Video clip one: spread of disease

- Overcrowding
- Poor sanitation
- Lack of shelter

(there are useful clips in the 'Surviving on the streets' section, for example, families and children living under a bridge, and in the 'Children's rights' section, for example, there is a shot of a child sleeping under a blanket outside in a litter-strewn area.)

### Video clip one answers (examples)

- Lots of people sleeping / living together → diseases are more easily spread
- Poor sanitation → people using the same water for washing / going to the toilet and drinking → increase in people suffering from water-borne diseases → illness / death
- Sleeping in cold / damp conditions → susceptible to colds / flu

### Video clip two: effects of alcohol / drugs & STIs

- Cuddling (sex at an early age)
- Taking drugs
- Alcohol

(there is a clip in the 'Surviving on the streets' section, for example, where street children are inhaling glue and in the 'Health' section, for example, there are a group of adolescents hanging out as couples).

### Video clip two answers (examples)

- Early sex → early pregnancy → bad health for girl
- Unprotected sex → STIs → death / illness / infertility
- Unprotected sex → street baby → poor health for child
- Damage to physical health (e.g. brain and kidney damage from sniffing glue) → less energy / death
- Damage to mental health (e.g. mental health issues related to smoking cannabis – paranoia, loss of memory etc.)

### Video clip three: effects of poor diet

- Rubbish tip
- Cooking in a dirty place
- Eating leftovers

(there is a clip in the 'Health' section, where for example, some children are cooking outside and another where a group are eating from a pile of rubbish)

### Video clip three answers (examples)

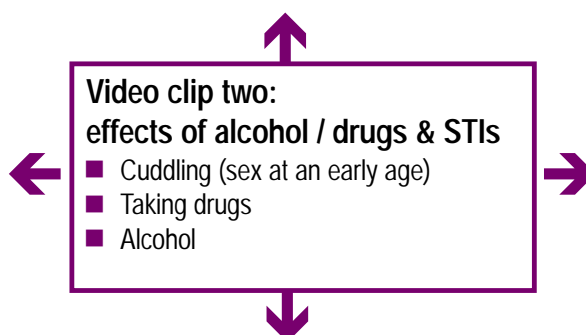
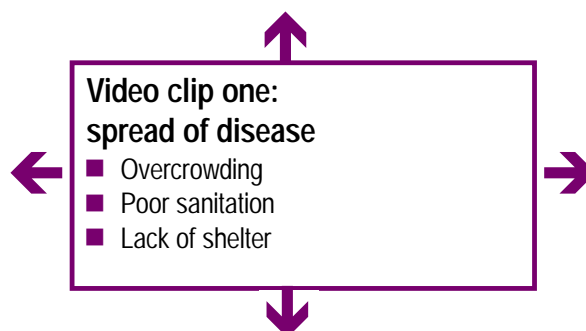
- Lack of food → lack of energy → malnutrition → reduce immune system → more prone to illness → poor physical and mental development
- Dirty food / water → food poisoning → sickness and diarrhoea → malnutrition → reduce immune system → more prone to illness
- Cooking in dirty places / use of dirty utensils → food poisoning → sickness and diarrhoea → malnutrition → reduced immune system → more prone to illness.
- Unbalanced diet → deficiencies in certain food types → malnutrition → prone to ill health / poor physical and mental development



**National Curriculum:** Sc1: Investigative skills: Considering evidence: m) Use knowledge to interpret observations. Sc2:

Humans as organisms: Nutrition: a) need for a balanced diet: d) food is used as a fuel, and for growth and repair; n) how the growth and reproduction of bacteria and the replication of viruses can affect health, and how the body's natural defences may be enhanced by immunization and medicines; m) health – abuse of alcohol, solvents, and other drugs affects health.

# Health consequences



# B6c Science

## Health hazards



**Key learning point:** Street children face many challenges in staying healthy:

- They face many threats to their health and suffer from very low levels of health;
- They have little access to basic health care.



### Resources:

A3 board game base, die and counters



### Instructions

#### Health hazards game

This exercise should be done in small groups. If possible the handout should be photocopied onto A3 sized paper. Each group will need one dice and a counter each. The game is played a bit like snakes and ladders and the winner of the game is the one who makes it to adulthood first. If a student lands on the box with RIP in it they have to leave immediately the game and act as an observer. The arrows on the board mark the direction of play. If a student lands on them they do not move until the next throw of the dice.

After the game has been played ask students how they felt playing the game:

- Did anyone end up doing something they have never done in real life? How did this feel?
- Did anyone find any of these things hard to imagine? Which things?



See also: Activity B3a, 'Surviving a year' board game, p. 23. The same follow-up activity can be used here where the events of the game can then be linked into a narrative.



Credit: marcuslyon.com for the ICT

Disabled boy begging, Puebla, Mexico.














### National Curriculum

Sc1: Investigative skills: Considering evidence: m) Use knowledge to interpret observations. Sc2: Humans as organisms: Nutrition: a) need for a balanced diet; d) food is used as a fuel, and for growth and repair; n) how the growth and reproduction of bacteria and the replication of viruses can affect health, and how the body's natural defences may be enhanced by immunization and medicines; m) health – abuse of alcohol, solvents, and other drugs affects health.

## Science

## Health hazards

<b>ONE</b> Day one on the streets at age 15...	<b>TWO</b> 	<b>THREE</b> 	<b>FOUR</b> You have not eaten today. you feel very, very faint from hunger. <b>GO BACK 3</b>
<b>EIGHT</b> You are beaten by a security guard for hanging around. The stick he used has cut open your arm. You are worried about keeping it clean. <b>GO BACK 2</b>	<b>SEVEN</b> 	<b>SIX</b> You cannot sleep as it is getting so cold. You try glue for the first time. You wake up with a bad head. <b>GO BACK 3</b>	<b>FIVE</b> 
<b>NINE</b> You go to the hospital to get the cut on your arm treated. You hear the doctor tell the nurse you smell. You run out and do not get treated. <b>GO BACK 2</b>	<b>TEN</b> You got a job at a factory today. You are happy – you can now eat every day. <b>GO FORWARD 4</b>	<b>ELEVEN</b> 	<b>TWELVE</b> 
<b>SIXTEEN</b> You have been working making matches. the dust from the matches is giving you a cough. <b>GO BACK 2</b>	<b>FIFTEEN</b> You went to the shelter tonight and had the wound on your arm treated. <b>GO FORWARD 2</b>	<b>FOURTEEN</b> 	<b>THIRTEEN</b> A friend shows you where they bring out the leftover bread every day for anyone who wants it. <b>GO FORWARD 1</b>
<b>SEVENTEEN</b> 	<b>EIGHTEEN</b> You met someone who told you about a friend who died from sniffing glue. You decide you won't do glue anymore. <b>GO FORWARD 2</b>	<b>NINETEEN</b> 	<b>TWENTY</b> 
<b>ADULTHOOD CONGRATULATIONS</b> You are 18 today!	<b>TWENTY-THREE RIP!</b> You catch pneumonia and die – your game is over.	<b>TWENTY-TWO</b> 	<b>TWENTY-ONE</b> A passer-by gave you a sandwich today. <b>GO FORWARD 1</b>

## B6d Science

# How disease & infections are spread



- Key learning points:**
- How bacteria and viruses are spread.
  - Children living on the streets are particularly vulnerable to ill health and disease.
  - Spread of disease can be prevented and measures can be taken to improve people's health.



### Instructions

Using the picture of where Sebastian lives on the student handout ask the students to answer the questions on the sheet.

### ✓ ✕ Answers (examples)

#### a) List all the ways germs are being spread in the picture e.g.

- Flies on food
- Overcrowding - air-borne and water-borne germs can be spread more easily
- Poor sanitation
- Animals licking food
- Infections left untreated

#### b) What illnesses could Sebastians get from living here? e.g.

- Water-borne diseases – typhoid and cholera
- Risk of HIV/AIDS from dirty needles
- Susceptible to colds / flu / chest infections etc. from sleeping outside
- Poor diet = little immunity to certain illnesses
- Dirty water and food = sickness and diarrhoea

#### c) What could be done to improve Sebastian's situation?

Ask students to either list what could be done or re-draw the picture showing how the situation could be improved. e.g.

- Immunisations against water-borne diseases
- Access to medical care
- Better diet to boost immune system and help the body grown and repair itself
- Access to clean water for washing, drinking and food preparation



### National Curriculum

Sc1: Investigative skills: Considering evidence: 2m) Use knowledge to interpret observations. Sc2: Humans as organisms; 2n) how the growth and reproduction of bacteria and the replication of viruses can affect health, and how the body's natural defences may be enhanced by immunization and medicines.

## Science

# How disease & infections are spread

This is where Sebastian lives, a street child in Kenya.



Look at the picture above and answer the following:

a) List all the ways germs are being spread in the picture.

b) What illnesses could Sebastian get from living here?

c) What could be done to improve Sebastian's situation? (List the things that could be done or re-draw the picture showing the improved situation)