HEALTH CARE PLAN FOR
xxxxxxxxx
TYPE-1 DIABETIC

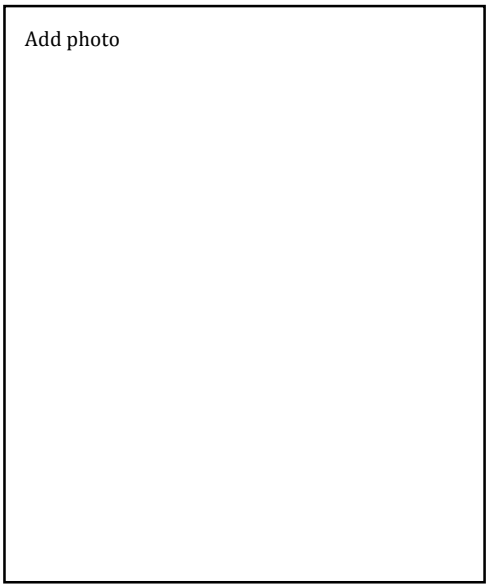
Date of Birth: xxxxxxxx

Address: xxxxxxxxx

Date of Plan: November 2009

Contact information:

Home Contact 1: xxxxxxxxx
Home Tel No: xxxxxxxxxx
Mobile: xxxxxxxxxxx



Clinical contact 1: School Health Nurse: xxxxxxxxxx

Clinical Contact 2: Diabetes Specialist Nurses based xxxxxxxxxxxxxx

GP: Dr xxxxxxxxxx

International emergency contact point: Medic Alert tel No: xxxxxxxxx
Membership Number: xxxxxxxxxx The hold parent contact numbers and details of current insulin regime.

Agreeement to Share Health Care Plan

This Health Care Plan has been discussed and agreed between:

School Health Nurse:

Parents:

This information must be shared with School Staff, and permission is given to use my childs's photo on school health documents. The Parent is responsible for supplying in date medication in school. I agree to contact the School Health nurse if any changes need to be made to this Health Care Plan.

The following school staff members have been briefed in the care of Type 1 Diabetes, and a copy of this care plan has been provided to each person.

Name	Role	Signature	Date
	Parent		
	Parent		
	Diabetes Specialist Nurse		
	School Nurse		
	Head Teacher		
	Class Teacher		
	SEN Co-ordinator		
	Lunchtime Supervisor		
	Lunchtime Supervisor		
	Office Staff		
	Higher Level TA		

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What is Type-1 Diabetes?

Type-1 diabetes is caused when the body does not produce insulin. Insulin is a hormone produced in the pancreas, which enables sugar from the food we eat to be converted into energy in the cells. If there is no insulin, the sugar simply stays in the blood, with servere long-term health implications, if left untreated. High sugar levels can cause damage to the kidneys, heart, eyes and nerve endings leading to damage to feet and hands. We are striving to maintain good blood glucose levels during school so that he can avoid complications of this disease. When there is a cure we want him to be healthy enough to enoy it – whenever it happens – perhaps 5, 10, 15 or 20 years time.

Xxxxxxxxx has Type-1 Diabetes, and is dependent upon insulin to be given by injection at breakfast time, lunchtime and dinnertime. Xxxxxxxxx's blood sugar levels will vary through the day depending on food and exercise and whilst the insulin does a good job, it is not perfect and that is why YOU NEED TO TEST HIS BLOOD SUGAR THROUGH THE DAY TO MAKE SURE IT IS NOT TOO HIGH OR TOO LOW. Xxxxxxxxx spends one-third of his day in school therefore his blood levels during this time are very important.

Xxxxxxxxx's ideal blood sugar range is between 4-10 mmol.
Xxxxxxxxx's target blood sugar is 6.0 mmol
If we can achieve these levels, Xxxxxxxxx will be safe, these are the same levels as a non-diabetic person, and the risk of long-term complication is small.

Be aware of Hypoglycemia (Hypo) and Hyperglycemia (Hyper)

Hypoglycemia is when the blood sugar levels are too low (below 4.0 mmol). It is the condition that is most likely to need treating in school. Xxxxxxxxx needs glucose if his level falls **below 4.0 mmol**. Xxxxxxxxx's signs of hypo are: he will say "I'm feeling low", and/or may have the following symptoms: hands shaking, quiet, pale, hungry, may be tearful or cross.

Reasons for low blood sugar are: too much insulin has been taken, not eating enough for the amount of insulin given, hot weather, during or after physical activity, unexpected level of high activity. **Xxxxxxxxx has mild hypos quite frequently**, and is used to saying when he is "low". He has not experienced a severe hypo but when/if he does, it will be a frightening experience and staff will need to take the required action fast.

Hyperglycema is when the blood sugar levels are too high ie **above 16.0 mmol**. Xxxxxxxxx's signs of high blood sugar are: headache, feeling tired, increased thirst going to the toilet often. Xxxxxxxxx needs additional insulin, plenty of sugar free fluids and access to the toilet. Reasons for high blood sugar: Illness, insufficient insulin given at mealtime, stress or excitement, inactivity. It is not sensible for Xxxxxxxxx to stay indoors at playtime. It may well result in a headache that will effect his ability to concentrate until his blood sugar returns to a normal level.

When to call parents: If Xxxxxxxxx is unwell. Parents will need to test the blood for ketones. This is the first indicator of a condition known as ketoacidosis. The blood becomes too acidic due to insufficient insulin and dehydration caused by fever or infection. Ketones are not obvious.

Quick Reference Emergency Plan for Xxxxxxxxx Brown
Hypoglycemia (Hypo) – Blood Glucose below 4.0 mmol

Causes of Hypoglycemia

- Too much insulin
- Missed food
- Delayed food
- Too much intense exercise
- Too much or too intense exercise
- Unscheduled exercise

When is this likely to happen?

- Suddenly, without much warning or after sport.

Symptoms

MILD

- Xxxxxxxxx will say "I'm low"
- Hunger
- Pale in colour
- Anxiety or intolerant

MODERATE

- Hunger
- Headache
- Shakiness
- Blurry vision
- Behaviour change to stroppy
- Poor co-ordination, confused

SEVERE

- Loss of consciousness
- Seizure
- Inability to Swallow

Actions Needed: **CHECK BLOOD SUGAR.** When in doubt always treat for HYPO. Always take hypo box to Xxxxxxxxx. Do not leave him unattended. If full recovery is made there is no need to be sent home.

MILD Blood Glucose 3.0-4.0

- Provide quick sugar source 2-3 glucose tables or half carton of Ribena
- Wait 15 minutes
- Recheck blood sugar
- If blood glucose is less than 4 mmol give 1 more glucose tablet.
- When blood sugar is above 4.0mmol give carbohydrate snack ie biscuit
- Record incident, complete slip and put in school bag to send home.

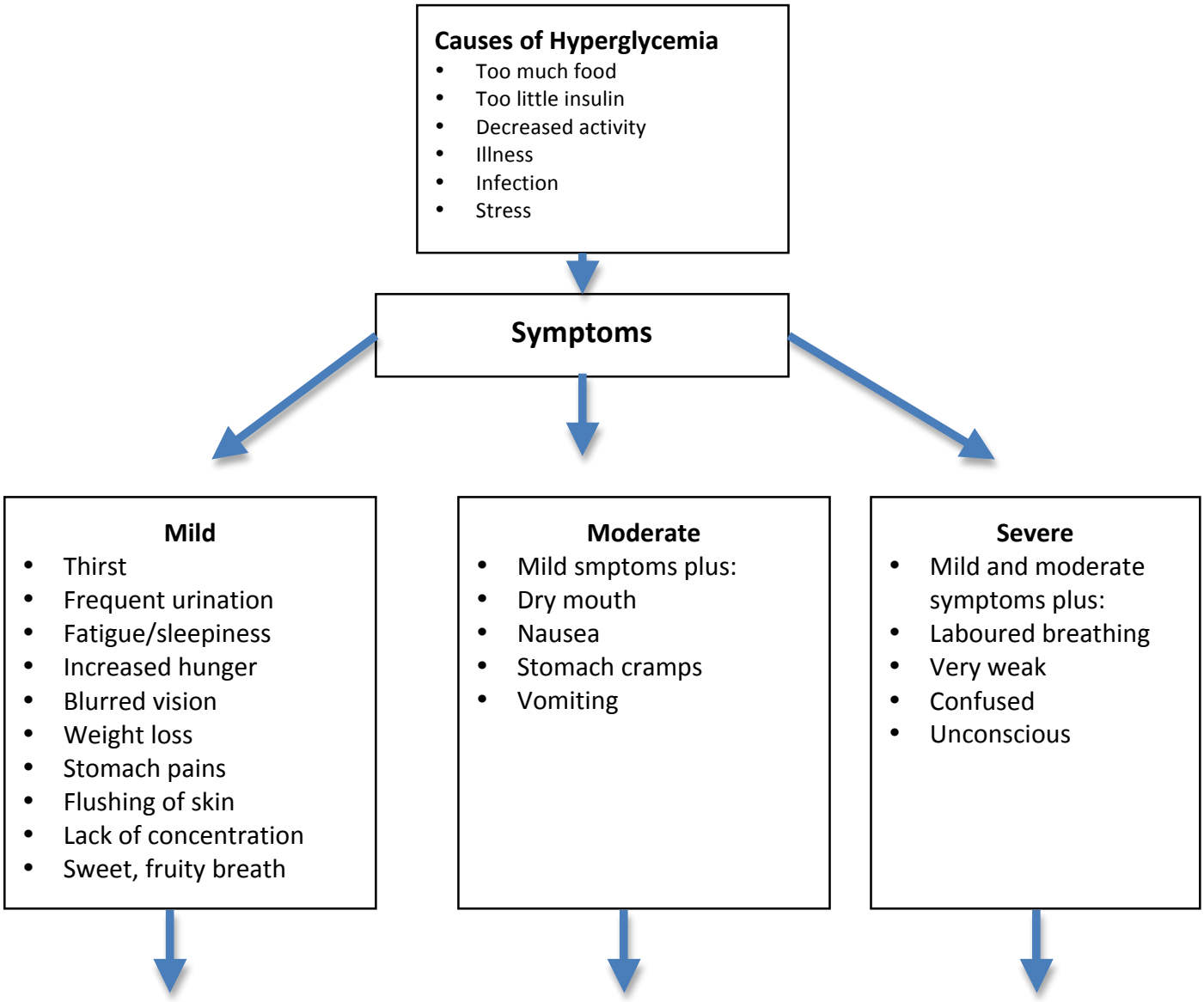
MODERATE Blood Glucose below 3.0 and conscious

- Give quick 4 Glucose tablets.
- Wait 15 minutes
- Recheck blood sugar
- If blood glucose is less than 4.0 mmol give 1 more glucose tablet.
- If no response to Glucose use glucogel. Apply half tube between check/gum.
- Follow with a snack of carbohydrate ie biscuit.
- Record incident, complete slip and put in school bag to send home.

SEVERE - unconscious

- Someone assists
- Don't attempt to give anything by mouth
- Place in recovery position
- Dial 999
- Stay with child
- Contact parents
- Call xxxxxx

Quick Reference Emergency Plan for Xxxxxxxxx
Hyperglycemia (High Blood Glucose over 16.0 mmol)



Action Needed: CHECK BLOOD GLUCOSE

Allow Xxxxxxxxx to go to the toilet – his body is trying to 'wee out' the glucose in his urine, so he will need to go frequently.

If Xxxxxxxxx feels unwell or blood glucose is over 20 call parents who will need to test the blood or urine for ketones and administer insulin. Ketones are the first indicator of a condition known as ketoacidosis. The blood becomes too acidic due to insufficient insulin, dehydration caused by fever or infection. Ketones are not obvious. Encourage Xxxxxxxxx to drink water or sugar-free drinks (not milk)

If Xxxxxxxxx is nauseous, vomiting or lethargic call parents, if they are unavailable call diabetes nurse at Bristol Children's Hospital or dial 999.

Daily School routine – Xxxxxxxxx

10.00 am	• Blood Glucose Test. Xxxxxxxxx can do this independently. He keeps his test kit on his desk with pencil case. • 6.0 mmol or below suggest to Xxxxxxxxx that he has a biscuit from his bag. • 6.1 mmol or higher suggest to Xxxxxxxxx that he does not need a snack. • If higher than 10 try to make sure he has a run around at breaktime. This will prevent his blood glucose continuing to climb.
10.20 am Break	Outside play whenever possible. Please do not make Xxxxxxxxx stay in at playtime to finish work – If required send work home for completion. His exercise is very important to maintain good blood glucose levels.
11.45 am	• Blood Glucose Test to check before lunchtime. • **Class Teacher** checks this has been done and Xxxxxxxxx writes BG reading on slip of paper and puts in his pocket. He can then refer to this before he gives insulin at lunchtime.
Lunchtime	• Xxxxxxxxx will bring a lunch box to school, which will contain instructions for the amount of insulin to be given (see page 10). Each food item will be carbohydrate counted and labelled. This will enable the correct dose of insulin to be given after he has eaten his lunch. • Xxxxxxxxx should go to lunch as normal with his class. When he finishes his lunch he must take his lunchbox to the medical room where he will be met by a member of staff or designated or Carer. **Routine:** • **Xxxxxxxxx** will do blood test at 11.45 am in his classroom. Xxxxxxxxx must present his reading to the Carer. • **Carer** will work out the insulin required based on the total amount of carbohydrate eaten, and if necessary, add a correction dose based on Blood Glucose reading. A typical dose is usually 2.0, 2.5 or 3.0. It is unlikely that you will need to give more than 4.0 units. • **Xxxxxxxxx** will prepare the insulin pen by inserting the needle and dial up the defined insulin dose. • **Carer** will check insulin calculation and dose with another member of staff and Xxxxxxxxx. • **Carer** will record time, BG reading, total Carbohydrate eaten and the dose of insulin given on the sheet supplied in the lunchbox. This needs to be signed and returned home with Xxxxxxxxx. • **Xxxxxxxxx** will give himself insulin in his arm or leg. • **Xxxxxxxxx** will replace cap on needle, remove it from pen and safely and place it in the sharps bin provided. • **Xxxxxxxxx** returns to play or class as appropriate
2.00 pm	• Xxxxxxxxx will do blood test. • 6.0 mmol or below suggest to Xxxxxxxxx that he has a biscuit from his bag. • 6.1 mmol or higher suggest to Xxxxxxxxx that he does not need a snack. • If higher than 10.0 try to make sure he has a run around at breaktime. This will prevent his blood glucose continuing to climb.
PE	Xxxxxxxxx must do a blood test before PE. His blood sugar needs to be around 8.0 mmol. If it is between 4-8 mmol give a carbohydrate snack before exercise. Always take hypo box onto school field or playground.

3.30 pm After school Clubs	Xxxxxxxxx must check his blood before activity. If blood sugar between 4-8 give snack from school bag. If he is over 8.0 he doesn't really need snack, but he may like to have one because he is hungry, so let him have a biscuit. If blood sugar 4.0 mmol or below treat as hypo. Make sure that has 3-4 glucose tablets and a biscuit and wait 10-15 minutes before he plays. Teacher must take hypo kit to activity.
School Trips	If Xxxxxxxxx is going to walk around town, perhaps to the Castle or Church, make sure he checks his blood before he leaves school. His level will need to be around 8.0 mmol. If it is below 8.0 mmol give him a biscuit before you leave. Take hypo kit and blood glucose testing kit with you.
Cookery/ curricular eating/holiday sweets	If the class is cooking or food tasting, it is important for Xxxxxxxxx to enjoy it too. Let him try one cake or one croissant. We can give an adjustment dose of insulin at lunchtime or when he gets home to compensate for the extra he has eaten. The same applies to "holiday" sweets, he can have one or two, but a whole packet is too many in one go. Suggest he has one or two and saves the rest for when he gets home.

Blood Tests

For convenience, Xxxxxxxxx keeps two blood meters in school. One is kept with him in the classroom at his desk. The second meter is with his hypobox in the classroom cupboard.

At 11.45 am Xxxxxxxxx needs to do his a pre-lunch blood glucose test. This reading will be used to calculate his insulin dose. The class teacher needs to check this has been done. Xxxxxxxxx must write the reading on a piece of paper and put it in his pocket. The class teacher, to indicate the reading is valid, must initial the reading. Xxxxxxxxx will then present the reading to the carer who is helping him with his insulin. The carer will log the result on the sheet provided in his lunchbox, and calculate the insulin dose based on this information.

Xxxxxxxxx can do blood tests independently, and they are automatically recorded on the meter. They are required to be done two hours after each meal ie 10.00 am, 11.45 am and 2.00 pm. Each night we upload the data and add the lunchtime reading onto the computer so we can monitor the trend. Insulin ratios/doses are adjusted by the Hospital based on this information. If a reading is not in the meter it shows that it has been skipped. Readings cannot be changed or deleted from the meter.

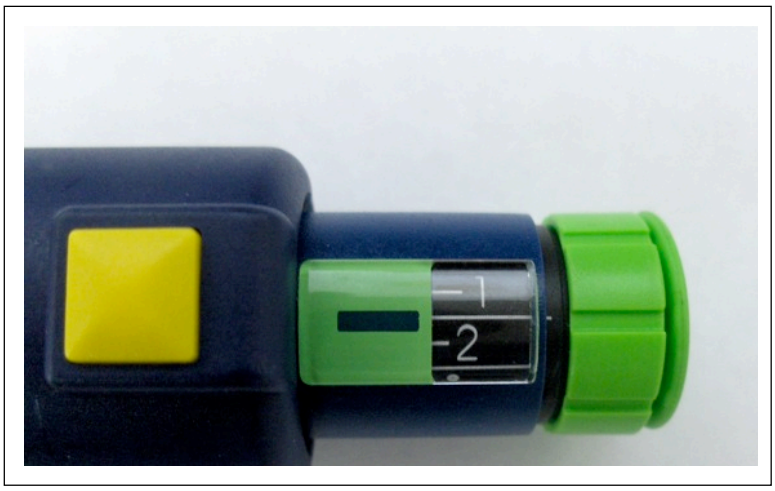
Equipment kept in school

In Class

- Copy of Care Plan and note in register
- Paper slips notifying parent of any hypos and treatment given.
- Personal blood meter brought to school each day
- Hypo-kit kept in classroom cupboard with spare blood meter
- Blood meter, Glucose tablets, Glucogel, carton of Ribena and biscuits.

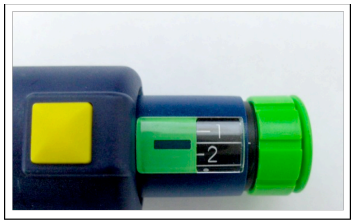
In Medical Room

- Copy of Care Plan
- Insulin Pen containing Novorapid insulin
- Sharps box
- Hypo-box containing: Glucose tablets, Glucogel, Ribena and biscuits
- Paper slips notifying parent of any hypos and treatment given



This is the PenMate Insulin Pen.
Note: In this photo the pen is showing a dialled dose of 1.5 units of insulin.
The long line denotes the 0.5 part-increment. The short line and number denotes the whole-increment

How much insulin? *(Ratios will change periodically, so the actual ratio may differ from what is written here. An accurate page is included in lunchbox every day, the Carer will be notified of change).*



NB: long line denotes half unit. This example shows 1.5 units dialled.

Xxxxxxxxx's lunchtime injection is based on the amount of carbohydrate (CHO) eaten at that meal, as well as his blood glucose (BG) level prior to the meal. This is known as carbohydrate counting. A good BG is between 4-10.0 mmol. If the BG is over 10 then you give a correction dose to lower the blood glucose to his target range. The injection is administered after lunch to ensure his carer knows what Xxxxxxxxx has eaten. Use Table 1 to calculate the correction dose based on reading done in classroom at 11.45 am. If in doubt do another BG using meter from classroom.
Use Table 2 to calculate the amount of insulin required to cover the carbohydrate content of the meal.

The correction dose + carbohydrate dose = TOTAL INSULIN REQUIRED FOR MEAL. This is given as one injection.
Xxxxxxxxx should not need more than 4.5 units total. It will usually be 2.0, 2.5 or 3.0.

Table 1

BG mmol reading at 11.45 am in class	Correction dose of insulin required (1:10) (B)
0-10.9	0
11.0-15.9	0.5
16.0-20.9	1.0
21.0-25.9	1.5

Table 2

Total CHO eaten (1:20)	Insulin dose to cover CHO eaten (A)
10-19	0.5
20-29	1.0
30-39	1.5
40-49	2.0
50-59	2.5
60-69	3.0
70-79	3.5

Food Item provided in lunchbox	CHO g amount per item	CHO eaten per item	Insulin dose to cover CHO eaten (A)	BG mmol reading at 11.45 am in class	Correction dose insulin required (B)	Total insulin Dose given (A) + (B) = (C) (C)
Total		Total CHO eaten:				
Name:	Time of Insulin	Date:		Signed:		

If in doubt just call:
We are always happy to help.

Appendix

Sample Log Page for Lunchbox.

In this example Xxxxxxxxx didn't eat all his lunch. He ate half his sandwich and apple. So the insulin has been reduced accordingly. However his blood glucose reading was high, so a correction has been added.

Food Item provided in lunchbox	**CHO g amount per item**	**CHO g eaten per item**	**Insulin dose to cover CHO eaten (A)**	BG mmol Reading at 11.45 am in class	**Correction dose insulin required (B)**	**Total insulin Dose given (C) (A) + (B) = (C) (C)**
Sandwich (two slices of bread cut into two halves)	22.0	11.0	**2.0**	11.0	**0.5**	**2.5**
Apple (4 slices)	6.0	3.0				
Cake	16.0	16.0				
Crisps	12.0	12.0				
Cheese string	0.0	0.0				
Pepperami	0.0	0.0				
Total	44 g	**Total CHO Eaten: 41g**				
Name: xxxxxx	Time of Insulin 12.37 pm	Date: 18/11/09		**Signed:**		

How to use an insulin pen: Xxxxxxxxx will do the following:

1. Screw on a single use needle (clockwise). Remove outer (clear) and inner (white) needle cap.
2. Dial 2 units trial dose (4 clicks). Express air and insulin from pen.
3. Dial the dose. Check. If you have dialled the incorrect dose expel from pen and dial up dose again.
4. Set Penmate by pulling back on the insulin pen (blue area) until it clicks.
5. Place pen on Site (usually arm or leg) and push the square yellow button. This fires the needle into the skin, he will depress the top part of the pen until the dial clearly shows 0 (zero). Check and audibly count to 10.
6. Remove device from injection site.
7. Ensure safe removal (anticlockwise) of needle and dispose in sharps bin. Replace chunky blue lid.
8. Return pen to case and place in locked cupboard.

Xxxxxxxxx had a hypo today at :………………am/pm. His Blood Glucose Reading

was: ………………………………………………….. I gave him ……………glucose tablets

15 minutes later at : ………………………………..am/pm his blood glucose reading was

……………………………………………………This was followed with Xxxxxxxxx having a carbohydrate snack:

[   ] Biscuit from his school bag or [   ] Biscuits from school hypo kit.

Signed: …………………………………………………………Date: ………………………

Xxxxxxxxx had a hypo today at :………………am/pm. His Blood Glucose Reading

was: ………………………………………………….. I gave him ……………glucose tablets

15 minutes later at : ………………………………..am/pm his blood glucose reading was

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[   ] Biscuit from his school bag or   [   ] Biscuits from school hypo kit.

Signed: …………………………………………………………Date: ………………………