SESS BEHAVIOUR RESOURCE BANK

Advice Sheet 32

STAR CHARTS[1] : A TOKEN ECONOMY SYSTEM

Most behaviour is controlled or influenced by the consequences which follow it. When behaviour is rewarded, or positively reinforced, it is more likely to occur again in the future. The Star Chart is a commonly used reward system. Behaviours are rewarded with star stickers (or tick, smiley faces, points, counters, credits, etc) which are collected by the pupil and then exchanged for rewards later on. Newspapers, garages, gyms and many other businesses use such techniques as a marketing ploy because they are powerful ways of influencing human behaviour.

Stars are reinforcing because they are associated with later rewards. Stars are particularly useful because it is not always possible to bring desired rewards to bear on behaviour immediately or every time the behaviour occurs (e.g. teachers are not generally able to drop everything else and head for the cinema to reward a pupil for doing homework).

Star Charts can be used to increase desirable behaviours that are currently occurring at a low rate (e.g. staying on task, being in class on time) as well as to decrease specific undesirable behaviours by reinforcing the absence of the behaviour (e.g. not hitting, not screaming). As positive behaviour (which is incompatible with the problem behaviour) increases, the problem behaviour will decrease.

Star Charts are not always the intervention of choice, but they can be an extremely useful and positive way of changing behaviour. Many people have tried Star Charts and found them to work. Others have been disappointed with their attempts at establishing a Star Chart. Often, Star Charts fail because they are not set up correctly. What follows describes how to set up an effective Star Chart and how to identify common problems which lead to a Star Chart not working.

SETTING UP A STAR CHART

Step 1 – Pinpoint the Behaviour to Change

Precisely define the behaviour you wish to change. *'If you are good for a whole day you will get a star'* does not tell the pupil exactly what 'good' means, nor does it tell the adult how to decide whether the pupil has been good or not. Beware of terms such as 'irritable', 'sad', 'having an outburst', 'throwing a tantrum' or 'aggressive'. These labels are of little use in a behaviour change programme as they are actually the observer's impressions or interpretations of the behaviour, rather than an accurate description of the behaviour. When it comes to allocating or withholding stars, poor definitions of the pinpointed behaviour can also lead to

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[1] *This material is adapted from original material presented by Warren Cann, Behaviour Intervention Support Team, Department of Human Services, Southern Metropolitan Region, 314b Thomas Street, Dandenong, Victoria, AUSTRALIA*

disagreements between the pupil and the adult. The best approach is to write down exactly what you see (as a fly-on-the-wall).

Examples of specific descriptions of behaviour, followed by commonly used less useful labels are:

- hitting, screaming, crying, swearing, kicking and punching walls (tantrum or anger outbursts);
- biting self, banging head against floor, cutting self with razor (self-mutilation);
- picking all objects off the floor and putting them in their correct place (tidy classroom);
- arriving 12 minutes late for class (lateness).

Step 2 – Measure the Behaviour

A Star Chart programme requires accurate behaviour recording if it is to be successful. Initially we need to observe and record with no intervention.

A 'before' measure of the behaviour, or **baseline**, is useful to collect before attempting to change behaviour. For example, when people join a weight loss programme their weight is measured prior to commencing the diet. A baseline provides an objective measure of the frequency (or severity) of the problem behaviour before you start your Star Chart.

Measuring the behaviour can be done in a number of ways. Three of the most useful ways are:

1. Counting the behaviour: e.g. the number of times a pupil hits someone, swears or slams a door.
2. Timing the behaviour: continuous behaviours can be timed – minutes screaming.
3. Record whether a behaviour occurs in specified intervals: this is a useful way to record behaviours that are too frequent to count or do not occur in discrete events.

Keep the behaviour record going, and do not change the way you record the behaviour once the Star Chart has been established. It can also be useful to draw up a graph and compare the rate of the problem behaviour before and after the Star Chart was implemented.

Step 3 – Set up a Chart

There are a number of components to setting up the Star Chart:

1. **The Chart:** Charts can have various formats. The pupil's name and the behaviour to be performed to earn the reinforcer must be specified on the chart. The chart should be situated somewhere which is easily viewed by both the pupil and adult as it provides a good reminder to both parties e.g. on the pupil's table, on a wall near the pupil, or on the teacher's table.
2. **Stars:** This example is assuming that stars will be used. (But stars are unlikely to be appreciated by older pupils. In this instance points, credits or signatures might be more appropriate). Whatever is used for the 'star' it should be easy to use and not generally accessible to the pupil in any other way.

3. **Reward Sheet:** This should specify the rewards that can be earned, and how many stars have to be earned to receive the reward(s). This can be on a separate sheet, or written on the chart.

Step 4 – Selecting Backup Rewards for the Stars

Initially, most pupils like the idea of stars. But soon the novelty wears off, unless there is some form of backup reward. A backup reward is a reward that can be earned with the stars. It involves a token exchange of the stars for something else that interests the pupil.

It is important that effective rewards are identified from the beginning. Do not assume that what you like, or what other pupils like, will be liked by the pupil.

In choosing rewards keep in mind the following:
1. The age, interests and appetites of the pupil.
2. Observe what the pupil chooses to do in his/her free time. What the pupil spends a lot of time doing is generally what is reinforcing for him or her.
3. Ask the pupil what s/he would like to do or receive. Or ask other adults that are familiar with the pupil what the pupil likes and dislikes.
4. Offer the pupil a range of objects, events and activities and observe which ones s/he chooses.
5. Select rewards which you can largely control. If the pupil has access to the reward regardless of whether s/he exhibits the pinpointed behaviour, it is unlikely that the reward will be effective in a programme.
6. Think about the sorts of rewards the pupil earns with their problem behaviour and use that reward to increase the positive behaviour. For example, if adult attention has been identified as maintaining a pupil's screaming behaviour, then use one to one adult attention as a reward for intervals where the pupil does not scream.
7. It is also important to carefully choose the amount of reward that can be earned. The amount of the reward should reflect the amount of time and effort required to perform the behaviour. Too much of a reward results in the pupil tiring or becoming sick of it, thus reducing the effectiveness of the reward. Too little reward is unlikely to maintain the pupil's motivation to continue to engage in the behaviour.

Step 5 – Setting a Behaviour Change Goal
It is important to be realistic in your expectations of behaviour change. Expectations of an immediate 100% behaviour change will lead to almost certain failure for the pupil.

Baseline information is useful in setting goals. When you are rewarding the absence of a specific behaviour, the length of the interval in which the behaviour has to be absent for the pupil to be rewarded is critical for the success of the programme. The interval should be based on the average time between responses as shown by the baseline record. For example, if a pupil engaged in screaming three times a day, on average, there is little use in presenting a star after a full day free of screaming. The interval is too long, and the pupil is unlikely to earn a star. On the other hand, if the interval is too short (say in this example, one star for every half hour) the pupil may be able to engage in the target behaviour without it affecting the level of reward which s/he will receive to any great degree.

Another way of setting realistic goals, particularly when trying to reduce a behaviour which is very frequent is to specify a **reduction in the behaviour** rather than its total elimination. For instance, if a pupil swears, on average, five times in a class, the first goal to earn a star might be swearing four times or less in a class. Gradually the goal would be made more difficult (3, 2 times, etc. until the behaviour can realistically be eliminated). Or, if trying to increase a behaviour which currently occurs very infrequently (e.g. a pupil attends school, on average, one day per week) the first goal to be met in order to earn a star would be a small increase in the behaviour (to attend two days per week). Gradually the criterion for earning the star increases.

It is also unrealistic to set a goal which specifies an increase in a particular behaviour if the pupil is not able to perform that behaviour in the first place. If the behaviour does not exist in the pupil's repertoire, then s/he will have to be taught it first. Be careful not to assume too readily that a challenging behaviour is a result of a pupil's defiance and not the result of lack of skills. It could be that he/she lacks an interpersonal skill, e.g. how to join a group; an educational skill, e.g. perform a particular mathematical skill (multiplication), or a personal skill e.g. tying shoelaces to play football, and that this could be the trigger that leads to the challenging behaviour. Perhaps by teaching the appropriate skill we can eliminate the behaviour.

Step 6 – Presenting Stars

When allocating stars to a pupil they should be presented in the following manner**:**

1. Immediately after the pinpointed behaviour has occurred. If the star does not immediately follow the target behaviour there is a danger that another intervening behaviour may inadvertently be rewarded.
2. Only when the behaviour has occurred.
3. In the initial stages of the programme, all occurrences of the behaviour should be rewarded with a star.
4. Where the absence of a specific behaviour is being rewarded, stars should be presented as soon as the response-free interval has occurred e.g. if a pupil avoids swearing during class, present the star (token / credit) at the end of the class.
5. Always combine allocation of stars with verbal praise which focuses on the positive aspects of their behaviour. (*Fred, I really like the way you and Susie have been playing together this morning. Here is another star for your chart*). This helps to ensure that when stars are gone the behaviour stays because of the social approval.
6. Do not make a big deal out of a pupil not earning a star. (*Fred, you hit Susie at lunchtime which means that you do not get a star this morning. If you work hard at it this afternoon, you can still earn a star*).
7. Not earning stars, or removal of stars, should not be used as a threat or a punishment to the pupil. If the pupil feels manipulated and controlled through the stars they are more likely to become resistant. The stars are there to focus attention on positive behaviour not the undesirable behaviour. If a misdemeanour occurs that is unrelated, apply a different sanction but do not remove the stars.

Step 7 – Graduating a pupil off a Star Chart

Once behaviour change has been achieved, it is important that the programme is not suddenly discontinued. If this happens, the pupil is likely to revert to old behaviour patterns. The Star chart should be faded out of the pupil's life gradually.

The Star Chart can be faded out by:

1. Introducing increasing delays between the pinpointed behaviour and the star (e.g. Fred was earning one star in the morning and one in the afternoon for not hitting other pupils in the class. Staff began to fade out the programme by rewarding Fred with one star a day for not hitting).

2. Changing from rewarding the pupil every time the behaviour occurs to an intermittent schedule where only some occurrences of the behaviour are rewarded (e.g. Susan earned a star for every occasion and later for every two occasions that she followed an instruction from her teacher. Beth earned a star every day she came to school on time until staff changed to rewarding her for every two days that she came to school on time).

POTENTIAL PROBLEMS AND HOW TO FIX THEM

1. The behaviour to be rewarded is not specified accurately enough. Pinpoint the behaviour and ensure that the pupil and all others involved know exactly what the definition of the pinpointed behaviour is.

2. The length of time between the star and the reward is too great. If pupils have to wait too long for the reward they lose motivation. It is better to have frequent small rewards than larger rewards that the pupil has to wait a long time for.

3. The amount of behaviour expected to change before the star is delivered is too great. Reduce expectations and look for small behavioural changes to reward before increasing your expectations.

4. The reward is not reinforcing. We cannot be sure that any given event is a true reward until we observe its effect on the behaviour. If a particular event that follows a behaviour increased that behaviour it is a true reward. If the behaviour does not change then consider changing the reward you are using.

5. Stars are not backed up with more valued reinforcers or the reward is not actually delivered. Stars lose their value quickly, and unless the stars are a way of earning more effective rewards, they will soon become meaningless to the pupil.

6. The pupil becomes tired of the same reinforcer. Too much of a good thing! To avoid pupils tiring of one particular reward consider setting up a reward menu where the pupil has some choice of rewards to spend his/her stars on.

7. The pupil has access to the reward through other methods. If the reward is a special food treat, and the pupil has access to food treats at any time, then the reward will not be effective. Choose a different reward that can be controlled.

8. Inconsistency! If staff members are inconsistent in either allocating stars, providing rewards or withholding stars and rewards, the programme is unlikely to work.

9. Behaviour is not monitored accurately enough. Inaccurate record keeping will cause problems. There is nothing worse than the pupil having performed the behaviour, but nobody recorded it, and the pupil consequently misses out on the reward. Keep accurate records of the behaviour throughout the programme.

10. Stars are removed. Don't do it! A different response is needed for other behaviours.

Examples of Star Charts are on the following pages.

MORNING PROGRAMME

Pupil's Name: *James*

Staff Involved: *Mrs. O Connor (class teacher), Ms. O'Brien (Special Needs Assistant)*

Week Beginning: *March 6th 2006*

Behaviour to Change: *James is often not ready to learn when class commences in the morning.*

Baseline for last week: *James did not meet the four criteria below on any of the days, and only arrived in to school on time on two days. On arrival each day he did not hang up his coat, spoke to other pupils, and was very slow to take out his books.*

Behaviour Change Goal: *That James will remember these 4 things to do each morning.*

DAILY TARGET: 4 STARS

Reward = Pare three pencils for the teacher after morning roll call (9.15).

WEEKLY TARGET: 15 STARS

Reward = Tidying class library on Friday 10.30 – 11.00

	Mon	**Tues**	**Wed**	**Thurs**	**Fri**
Arrives to school on time.	☆	☆	☆	☆	☆
Hangs coat in the correct place.	☆	☆		☆	☆
Sits quietly at own desk.		☆		☆	☆
Takes out all books etc for morning lessons.	☆	☆			☆
TOTAL	**3**	**4**	**1**	**3**	**4**
WEEKLY TOTAL					**15**

CLASS ENTRY PROGRAMME

Pupil's Name: *Ann*

Staff Involved: *Mrs. O Connor (class teacher), Ms. O'Brien (Special Needs Assistant)*

Week Beginning: *March 6th 2006*

Behaviour to Change: *Ann does not enter class quietly or sit down quietly when he enters.*

Baseline for last week: *Ann entered class appropriately on three occasions out of five at 9.00, but on only two other occasions (Tuesday at 11.00 and Friday at 11.00).*

Behaviour Change Goal: *That Ann will walk in quietly at the beginning of each class and sit at her own desk immediately.*

DAILY TARGET: 3 STARS

Reward = Take paper recycling to office / recycling centre at 1.15 p.m.

WEEKLY TARGET: 11 STARS

Reward = 30 minutes of Golden Time on Friday afternoon (Ann identifies on Monday an appropriate activity which she would like to choose on Friday afternoon e.g. time on computer, puzzle, listen to DVD, art, etc).

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TIME	Mon	Tues	Wed	Thurs	Fri
9.00	☆	☆	☆	☆	☆
11.00	☆	☆		☆	☆
1.00				☆	☆
TOTAL	**2**	**2**	**1**	**3**	**3**
WEEKLY TOTAL					**11**

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SWEARING PROGRAMME

Pupil's Name: *Lisa*

Staff Involved: *Paul Jones (class teacher), Ann McNamara (Special Needs Assistant)*

Week Beginning: *March 20th 2006*

Behaviour to Change: *Lisa swears a lot, both in class and in the yard.*

Baseline for last week: *Lisa was observed last week and recorded as swearing on average 10 times a day, 6 times in the classroom and 4 times in the yard.*

Behaviour Change Goal: *That Lisa will reduce swearing to a maximum of one incident per class period in the classroom (i.e. one misdemeanour allowed but recorded, second misdemeanour in that period means no star).*

DAILY TARGET: 2 STARS

Reward = Lisa gets one sticker for her pop music scrapbook.

WEEKLY TARGET: 11 STARS

Reward = Lisa gets 20 minutes on Friday afternoon for an activity of her choice on computer.

TIME	Mon	Tues	Wed	Thurs	Fri
9.00 – 10.50	☆	☆	☆	☆	☆
11.00 – 12.30			☆	☆	☆
1.00 – 2.40				☆	
TOTAL	**1**	**1**	**2**	**3**	**2**
WEEKLY TOTAL					**9**

Note: *List of prohibited words that Lisa uses is given to Lisa so that she is aware of what is not acceptable. Beside this list is a list of other words / prases which are allowed, and which are taught to Lisa. Lisa is encouraged to use these words / phrases as much as possible.*

Behaviour Observation Form

Pupil: _____   Class: _____   Observer: _____

Behaviour to be observed: _____

Date	Time Observed	Activity engaged in by pupil at this time	Frequency Count

Comments:

_____
_____
_____
_____
_____
_____
_____
_____

STAR CHART ACTIVITY

Work in pairs. Choose a pupil whom you feel would benefit from a Star Chart.

PUPIL'S NAME: _____   AGE: _____

List the challenging behaviours that you associate with this pupil. Be as specific as you can in describing them.

STEP 1: Pinpoint the behaviour to change. Agree <u>one</u> behaviour you would like to work on.

Behaviour Selected: _____

Are stars appropriate for this pupil?   *Yes* ____ *No* _____ If not, what system is more age / ability appropriate?

Signature _____   *Credits / Points* _____   *Tokens* _____   *Stickers / Stamps* _____

STEP 2: Measure the behaviour.

Decide how you will measure a baseline for the behaviour. Will you (1) count it, (2) time it, or (3) record whether behaviour occurs in specified intervals? How long will you observe / measure for?

STEP 3: Set up the chart

Using the blank chart template given, list the elements or the time-frame in the targeted behaviour. Consider if it is in the pupil's repertoire to achieve what is being asked of him / her.

STEP 4: Select back-up rewards

Make a list of immediate (daily) and long-term (weekly or monthly) rewards that you feel might be of interest to the pupil. Ensure that these are rewards that you can offer / deliver.

IMMEDIATE (DAILY) REWARDS	*LONG-TERM (WEEKLY / MONTHLY) REWARDS*

How will you ascertain if these items are actually rewards for the pupil? _____

_____

Step 5: Set up a behaviour change goal

What is the behaviour change goal you have identified? _____

_____