

Step	Cognitive	Perceptual	Motor	Psychological	Social
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**Cycling a 2 wheeled cycle solo along a road – activity analysis with psychosocial and environmental considerations**

Step	Cognitive	Perceptual	Motor	Psychological	Social
i. Plan for bike ride: decide where to go, wear/ carry appropriate clothing for the weather and distance, find and take bike lock and key.	Memory: semantic, episodic, working Selective attention Executive function: planning/ organisation, reasoning, initiative, creativity, monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception.	Muscle strength, joint range of movement - gross, fine, dexterity, unilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, fine, precision, voluntary active movement, resisted movements (vs gravity), isometric (static) muscle action, isotonic action-concentric, eccentric	self-expression, self-confidence	Solitary
ii. Holding handlebars and/ or saddle, wheel cycle from shed and lean against wall. Close shed door.	Memory: procedural, working Selective attention Executive function: planning/ organisation, monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep.	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, unilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active movement, resisted movements (vs gravity), isometric (static) muscle action, isotonic action-concentric, eccentric	self-confidence	Solitary
iii. Check tyres are pumped up by squeezing edges. If not, postpone ride.	Memory: procedural, working. Selective attention Executive function: planning/ organisation, reasoning, monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep	Muscle strength, joint range of movement - gross, dexterity, unilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active	dealing with disappointment, frustration tolerance, self-confidence	Solitary

Step	Cognitive	Perceptual	Motor	Psychological	Social
			movement, isometric (static) muscle action, isotonic action- concentric, eccentric		
iv. Check the brakes are working by pushing the bike along whilst applying brakes. If not working, postpone ride.	Memory: procedural, working. Selective attention Executive function: planning/ organisation, reasoning, monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active movement, isotonic action-concentric, eccentric	dealing with disappointment, frustration tolerance, self-confidence	
v. Wheel cycle to edge of road holding with handlebars/ saddle, away from parked cars.	Memory: procedural Selective attention Executive function: monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, auditory recognition – sound	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active movement, isotonic action-concentric, eccentric	Self--confidence	
vi. Standing on pavement side of bike, facing direction of travel, holding bike, check road for traffic from behind.	Memory: working. Selective attention Executive function: monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, auditory recognition – sound, pitch	Muscle strength, joint range of movement - gross, unilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active movement, isometric (static) muscle action, isotonic action-concentric, eccentric	control of emotion, self-confidence	Solitary
vii. When no traffic, put bike about half a metre into the road, parallel to kerb, and put	Memory: procedural, working Selective attention	Figure ground, form constancy, spatial awareness, visual	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, co-	control of emotion, dealing with disappointment, frustration tolerance, self-	Solitary

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foot to other side of frame onto the ground. Continue holding onto handlebars.	Executive function: reasoning, monitoring	discrimination, object recognition, proprioception, pressure sensation – light, deep, auditory recognition – sound, pitch, language	ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active movement, resisted movements (vs gravity, isotonic action-concentric, eccentric	confidence	
viii. Move pedals so cranks lie on 10 o'clock - 4 o'clock line when look from the side.	Memory: procedural Selective attention Executive function: monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep, auditory recognition – sound, pitch	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grip, voluntary active movement, isotonic action- concentric, eccentric	self-confidence	Solitary
ix. Check behind for traffic again. When traffic clear, holding onto handlebars, simultaneously sit on saddle and put feet on pedals then push/ rotate, to move off.	Memory: procedural, working. Selective attention Executive function: monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep, sensation protective – pain, auditory recognition – sound, pitch, language	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, unilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grip, voluntary active movement, isometric (static) muscle action, isotonic action-concentric, eccentric	control of emotion, dealing with disappointment, frustration tolerance, self-confidence	Solitary
x. Continue pedalling steadily, adjusting speed of rotation to environment. Maintain a state of alertness for any changes in the environment requiring a change in speed or position in the road.	Procedural memory, Sustained attention, Executive function: monitoring.	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep,	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, stamina, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grip,	control of emotion, self-confidence	Solitary

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		sensation protective – pain, auditory recognition – sound, pitch, language	voluntary active movement, isometric (static) muscle action, isotonic action- concentric, eccentric		
xi. When wishing to stop, look ahead for a suitable stopping place on left, whilst still cycling.	Memory: procedural, working. Sustained attention Executive function: monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep, sensation protective – pain, auditory recognition – sound, pitch, language	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, stamina, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grip, voluntary active movement, isometric (static) muscle action, isotonic action- concentric, eccentric	control of emotion, dealing with disappointment, frustration tolerance, self-confidence	Solitary
xii. Look over left shoulder to check for traffic behind, give clear signal with left arm then pull over to the left, applying brakes appropriately to come to stop.	Memory: procedural, working. Sustained attention Executive function: monitoring	Figure ground, form constancy, spatial awareness, visual discrimination, object recognition, proprioception, pressure sensation – light, deep, sensation protective – pain, auditory recognition – sound, pitch, language	Muscle strength, joint range of movement - gross, dexterity, bilateral movement, unilateral movement, co-ordination, balance, core stability, righting reactions and vestibular control, base of support, grip – gross, power grips, voluntary active movement, resisted movements (vs gravity), isometric (static) muscle action, isotonic action- concentric, eccentric	control of emotion, self-confidence	Solitary

### Psychosocial considerations

The perception that cycling is dangerous can put people off.

Although cycling may not be culturally acceptable for some (because it may be seen to mean you can't afford a car) it is seen as good for others as it is relatively cheap, environmentally friendly and reduces waits at bus stops. Also cycling is easier than walking for many people.

If a person has had an incident involving a cycle they may be nervous of cycling again.

### Environmental considerations

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The business of a road with motor traffic may make it too frightening to considering riding on.

The quality of the road surface eg. pot holes can require greater agility and/ or concentration.

Weather needs to be considered. The road surface may be wet and slippery or there may be poor visibility due to fog at the start or during the ride, all requiring greater cycling confidence and/ or concentration.

When cycling, there is a constant need to watch for pedestrians stepping off the pavement without looking, and children e.g. walking to/from school, not paying attention to other road users. There is also a need to watch for car doors being opened into the road.

How to make it easier	How to make it more difficult
<p>Adapt:</p> <ul style="list-style-type: none"> <li>• Use different kinds of cycles such as various trikes, recumbents, handcycles, tandems, quad bikes.</li> <li>• Cycle with someone else or in a group</li> </ul> <p>Remediate:</p> <ul style="list-style-type: none"> <li>• Use different kinds of cycles such as various trikes, recumbents, handcycles, tandems, quad bikes.</li> <li>• Start on a quieter road or ride a bike in a park or along a motor traffic free route</li> <li>• Cycle with someone else or in a group</li> </ul>	<ul style="list-style-type: none"> <li>• Make it a busier road</li> <li>• Add in junctions from minor to major roads, from major to minor roads, turning both left and right</li> <li>• Add in traffic lights (easy and complex), turning left, right and going straight on</li> <li>• Add in roundabouts (small and large), turning left and right, and going straight-ahead</li> <li>• Add in over-taking</li> <li>• Make it a new journey, requiring map reading skills</li> <li>• Organise a bike ride for friends, family</li> <li>• Do the shopping</li> <li>• Pick up the children from school, to carry in a child seat or on their own bikes</li> <li>• Ride to work/ a friend's house/ bingo/ the café / the park/ the takeaway</li> <li>• Fix flat tyres or brakes if not working</li> <li>• Make it a journey at night, requiring the use of lights</li> <li>• Make it an overnight journey, requiring the booking of accommodation</li> <li>• Use a trailer</li> </ul>